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Golden Gate Vanpool Demonstration Project

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Interim Report
July 1979

Service and Methods Demonstration Program



U.S. DEPARTMENT OF TRANSPORTATION
Urban Mass Transportation Administration and
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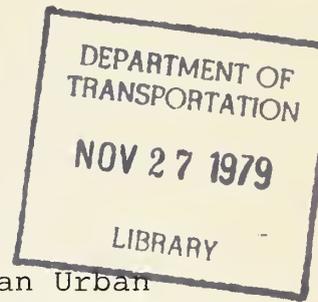
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16. Abstract This interim report evaluates the Golden Gate Vanpool Demonstration Project activities begun in October 1977. The project was designed to test the feasibility of a public sector agency's (Golden Gate) promotion of the formation of vanpool groups which would be operated and administered after a six-month introductory period on a private basis. New groups would then be formed and placed in the vacated project vans. The objective of the demonstration is to successfully promote commuter ridesharing through vanpools. As such, the demonstration is part of a larger promotion of ridesharing involving both carpools and vanpools. The project grantee, the Golden Gate Bridge, Highway and Transportation District, is a multi-modal transportation agency which operates buses and ferries and sponsors club buses, with control of a toll bridge and joint control of a High Occupancy Vehicle (HOV) highway lane that feeds into it and leads to the San Francisco employment area. The Golden Gate Corridor presents a set of conditions ideal for vanpool formation: a single congested traffic corridor with an exclusive HOV lane leading into a major employment center via a toll bridge. The vanpool facilitator controls the toll booth and actively promotes ridesharing by allowing free bridge passage for 3-person or larger carpools and for vanpools. This report describes operating characteristics and documents planning implementation stages. Analyses of service levels, demand, productivity, marketing strategies, and vanpooler demographics are presented. The report points out that the Golden Gate Project clearly demonstrates that a public transit authority can facilitate vanpool formation and that issues once viewed as constraints, such as 13(c) agreements and reasonable insurance coverage, can be negotiated.					
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PREFACE



The Golden Gate Vanpool Demonstration Project is an Urban Mass Transportation Administration funded Service and Methods Demonstration program. The grantee, the Golden Gate Bridge, Highway and Transportation District (GGBHTD), is a multi-modal public transportation agency operating in the San Francisco Bay Area in California.

The purpose of this project is (1) to test the ability of a transportation agency to facilitate vanpool formation, and (2) to test the feasibility of transitioning vanpoolers from project vans into private vanpool arrangements.

This Interim Report describes project planning and implementation stages and evaluates the first eight months of operations. The report has been prepared for the Transportation Systems Center by Crain & Associates. Edith Dorosin was primarily responsible for report writing and production. Peter FitzGerald was involved in the early report writing, Bruce Richard provided writing support, and John Crain provided guidance. Editing was performed by Jane Van Dusen who, with Ruth Campbell and Catherine Crites, typed the report.

The author wishes to thank Mark Abkowitz, the TSC technical monitor, and Paul Fish, the UMTA contract monitor, for their thoughtful comments, and the Golden Gate project staff for their cooperation and many contributions to the data collection process.

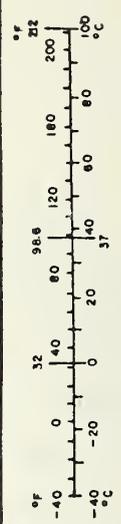
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
m ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³
		TEMPERATURE (exact)		
	Fahrenheit temperature	5/9 (ishtar subtracting 32)	Celsius temperature	°C

Approximate Conversions from Metric Measures

When You Know	Multiply by	To Find	Symbol
	LENGTH		
millimeters	0.04	inches	in
centimeters	0.4	inches	in
meters	3.3	feet	ft
meters	1.1	yards	yd
kilometers	0.6	miles	mi
	AREA		
square centimeters	0.16	square inches	in ²
square meters	1.2	square yards	yd ²
square kilometers	0.4	square miles	mi ²
hectares (10,000 m ²)	2.5	acres	acres
	MASS (weight)		
grams	0.035	ounces	oz
kilograms	2.2	pounds	lb
tonnes (1000 kg)	1.1	short tons	short tons
	VOLUME		
milliliters	0.03	fluid ounces	fl oz
liters	2.1	pints	pt
liters	1.06	quarts	qt
liters	0.26	gallons	gal
cubic meters	35	cubic feet	ft ³
cubic meters	1.3	cubic yards	yd ³
	TEMPERATURE (exact)		
Celsius temperature	9.5 (then add 32)	Fahrenheit temperature	Fahrenheit temperature



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1. EXECUTIVE SUMMARY

The Golden Gate Vanpool Demonstration Project is an UMTA funded Service and Methods Demonstration project that began operations in October 1977. This interim report evaluates project activities through June 1978. The project was to terminate June 1979; however, it appears likely that it will be extended for an additional year.

The project grantee, the Golden Gate Bridge, Highway and Transportation District (GGBHTD), is a multi-modal transportation agency -- it operates buses and ferries, and sponsors club buses -- with control of a toll bridge and joint control of a high occupancy vehicle (HOV) highway lane that feeds into it and leads to the San Francisco employment area.

The project was designed to test the feasibility of a public sector agency's promoting the formation of vanpool groups which would be transitioned after a six month introductory period into non-project vans. New groups would then be formed and placed in the vacated project vans.

The Golden Gate corridor presents a set of conditions ideal for vanpool formation: a single congested traffic corridor with an exclusive HOV lane leading into a major employment center via a toll bridge. The vanpool facilitator controls the toll booth and actively promotes ridesharing by allowing free bridge passage for 3-person or larger carpools and for vanpools. Disincentives to the private automobile are high, incentives to rideshare exist, and the long distance commute market favorable to vanpooling is strong and growing each year.

PLANNING

The planning period occurred over two years. The two events most critical to implementation were negotiations of a 13(c) agreement with the local transit union and arrangements for affordable insurance coverage.

OPERATIONS

The project has implemented 30 vanpools during the first eight months of operations. The greatest number (17) were implemented during the fifth and sixth months. A total of 1350 persons submitted applications to vanpool and 287, or 21 percent, are active vanpoolers at the time of this evaluation. Twenty vans serve commuters in Market #1, persons who reside in Marin or Sonoma Counties and work in San Francisco, while ten vans serve commuters in Market #2, persons who reside and work within Marin and Sonoma Counties* (see map, page 7). The average round trip distance for the 30 van-fleet is 80 miles.

The project's fleet of 35 vans was purchased with UMTA monies. The vans have been reliable and free of major maintenance problems; the drivers have been reliable and stable; the safety record has been excellent. The fare schedule is competitive with alternate modes of transportation and is lower than that of another third party vanpool program serving commuters in San Francisco and other Bay Area employment centers.

DEMAND FOR SERVICE

Vanpool coverage extends beyond that of local transit; vanpools have appeal even where fast reliable transit exists. The greatest demand for service is by the long distance commuter

*One of the ten vans serves commuters working in Sonoma County and living in Alameda County located across the bay; one serves commuters living in Solano County and working in Marin County.

and by commuters who prefer vanpool over bus transit as a faster commute mode. The greatest demand for project vehicle type is for the larger, customized and higher-priced luxury van over the bench seat deluxe van.

Vanpool driver reliability and stability is very high. Even with minimal incentives, a free commute and limited personal use of the van at a charge of 11¢ per mile, the project has attracted a sufficient number of drivers. Vanpooler stability is also relatively high. The average occupancy is 9.6 vanpoolers per van.

IMPACT ON USERS

Vanpoolers find vanpooling safe, reliable and economic. Vanpoolers who were former transit commuters save time and those who were former carpoolers spend more time. For round trip commutes greater than 30 miles, vanpool is cheaper than bus transit; for round trips greater than 27 miles in a deluxe and 35 miles in a luxury van, vanpool is cheaper than a 3-person carpool. Vanpool costs less than commute by single occupant automobiles for all distances, and it is cheaper than a 5-person carpool for the very long commutes.

MARKETING STRATEGIES

The project's direct access to commuters in Market #1 as they travel along their daily commute most likely influences the success of the various marketing strategies. The project's most cost-effective (cost per returned application) strategy has been the distribution of applications to potential poolers as they passed through the toll bridge. The least cost-effective strategy was the series of five community meetings advertised in the local media.

PRODUCTIVITY AND ECONOMICS

Compared to other commute modes, vanpooling has a higher vehicle productivity than carpools and lower costs than traditional bus transit. At this interim stage, data suggest that the public subsidy of a 40-mile one-way passenger trip by bus is \$1.65 and by project van is \$1.94. If the transition program is successful, then there is every reason to believe that the subsidy per passenger trip by vanpool will fall well below the subsidy per passenger trip by bus for commutes of comparable length.

SUMMARY FINDINGS

The Golden Gate project clearly demonstrates that a public transit authority can facilitate vanpool formation; and that issues once viewed as constraints, such as 13(c) agreements and reasonable insurance coverage, can be negotiated. The objective of transitioning vanpool groups into non-project vans is behind schedule. However, there are indications that the process will work and the transition program will go forward during the second phase of project operations.

The project is currently (December 1978) seeking a one year extension designed to develop and test the transition program, to expand the total number of vanpool groups implemented and to test the viability of both smaller (8 seat) and larger (15 seat) vans. A final report analyzing the transition program and the accumulated operational data is planned for completion in the fall of 1979.

2. INTRODUCTION

2.1 PROJECT OVERVIEW

The Golden Gate Corridor is a beautiful, hilly, residential suburban area just north of San Francisco passing through Marin and Sonoma Counties. It has a major peak period flow of traffic as many of its residents commute back and forth to San Francisco using the U.S. 101 freeway and the Golden Gate Toll Bridge, the only continuous north-south land route connecting the North Bay Peninsula and the San Francisco Peninsula (see Figure 2-1). In addition to traffic crossing the Golden Gate Bridge, commute traffic for origins and destinations within the counties north of the bridge also adds to the congested freeway traffic. Both of these commute markets produce traffic conditions intended to be impacted by the project. Figure 2-2 provides a general map of the San Francisco Bay Area, indicating the five major cities in the Golden Gate Corridor along the U.S. 101 highway.

The Golden Gate Bridge, Highway and Transportation District (GGBHTD), the project grantee, operates the toll bridge, a subsidized bus service (including subsidized club buses, or subscription commuter buses), subsidized ferry service, and highway lane control in the corridor. The bus operations (Golden Gate Transit) are conducted in Marin and Sonoma Counties and between these counties and San Francisco. The highway lane control consists of a reserved lane on Highway 101, north of the bridge, for buses, carpools and vanpools during the morning and evening rush periods.

The District has received a Service and Methods Demonstration (SMD) Grant (number CA-06-0095) from the Urban Mass Transportation Administration (UMTA) for the purpose of promoting vanpooling by commuters in the heavily travelled Golden Gate



FIGURE 2-1. GOLDEN GATE BRIDGE

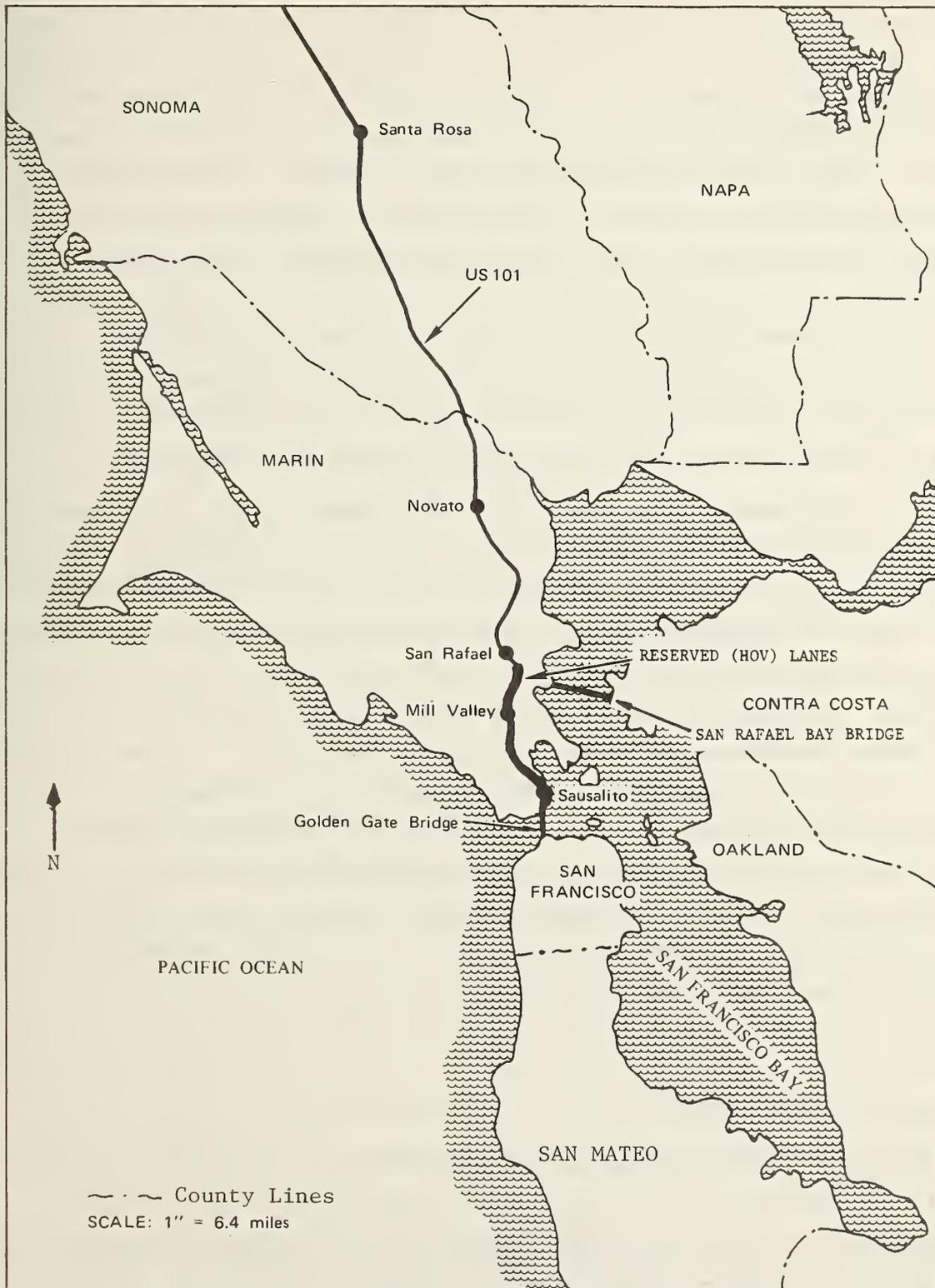


FIGURE 2-2. THE GOLDEN GATE CORRIDOR AND SAN FRANCISCO BAY AREA

Corridor. The \$685,000 grant is for a two year period of operations, commencing in July 1977. The grant provides \$300,000 for the purchase of 35 vans, \$200,000 for staff and \$185,000 for marketing, professional services, overhead, supplies and contingencies. User payments are expected to pay for the operating expenses of a van, including depreciation. The fares are intended to approximate user costs that would be experienced on the basis of private operation of the vanpool. The accumulating depreciation fund, from rider payments on the first 35 vans, is to be used 1) for initial vacancies in vanpool formation, 2) to facilitate the purchase or leasing of additional demonstration vans for the project or 3) for other promotional purposes.

The intention of the project is to promote and form commuter groups who will use the project vans for an introductory period of approximately 6 months. At the end of that time, successful groups will be "seeded" into vans available from private commercial leasing agencies or purchased by individual drivers or employers. The project will be testing the feasibility of a public sector agency (Golden Gate) facilitating the formation of vanpools which will then be operated and administered on a private basis. Depending on the success of the demonstration, Golden Gate or some other third party agency may wish to continue promoting and/or administering vanpools in the area. Rides for the Bay Area, Inc. (RIDES, Inc.), formed in 1977, is one such nonprofit vanpool promotional agency.

2.2 PROJECT OBJECTIVES

Locally, the Golden Gate Bridge District is faced with near-capacity volumes of vehicles on the Golden Gate Bridge during peak commuter periods. At the same time, the Bridge District is limited in the resources that can be used to subsidize District transit services which already have a very high peak to base period ratio of patronage. The objective of the demonstration,

then, is to successfully promote commuter ridesharing through vanpools. As such, the demonstration is part of a larger promotion of ridesharing involving both carpools and vanpools. These modes increase highway lane productivity over the single occupant automobile without requiring operating subsidies. Thus, it is hoped that success in this direction will decrease vehicle demand on the capacity of the bridge lanes while not requiring any further expansion of the deficit financed District transit service. The primary target market is those commuters who make long trips to work and live in areas poorly served by transit. This allows for concentration of transit services in more densely populated areas, closer to employment centers.

Since the time of the original grant application and initial evaluation design, a separate, new objective for the project has emerged. Due to the fact that the Golden Gate District is involved in transit and transportation planning for the whole corridor and not just bridge operations, increases in commuter traffic within Marin and Sonoma counties have become of concern to the District. Consequently, the vanpool program is oriented to commuter traffic within Marin and Sonoma counties and east across the Richmond-San Rafael Bridge as well as commuter traffic to the San Francisco Peninsula.* Reverse commute trips are also included. There are, then, three potential markets: Market #1 consists of commuters who travel from the north-bay counties across the bay into the San Francisco Peninsula (estimated to be 35,000), Market #2 consists of commuters who travel totally within the north-bay counties or from the north-bay counties to the east-bay counties, i.e., intra-suburban, peak period direction (estimated to be 105,000), and Market #3 is reverse commuters from

* Officially, the project services are available for any commute trips with either origins or destinations in Marin, Sonoma or Napa Counties. Napa County (see Figure 2-2) is primarily rural in its land use pattern and is not considered to be a part of the primary market for the project.

the San Francisco Peninsula or the east-bay counties to the north-bay counties (estimated to be 5,000).

There is no set criteria established as to the desired amount of impact on corridor traffic through the vanpooling project. The initial goal was to form approximately 90 vanpools within Market #1 during the two year period, using the 35 project vans. Other vanpools may be formed privately as a spin-off result of the project's promotional activities. In addition, it is hoped that the combination of demonstration vans and seeding can be tested for several generations of introductory vanpool groups.

At the present time, approximately 20,000 vehicles pass over the Golden Gate Bridge, southbound, between the hours of 6 AM and 10 AM. The mean occupancy rate for private vehicles is 1.36 persons per vehicle. The maximum expected impact of 90 vanpools in Market #1 would be diversion of approximately 900 persons from 660 vehicles into 90 vans or 570 fewer vehicles. Such a reduction would represent a 3 percent decrease in vehicles during the 6-10 AM commute period. This figure will be less if a significant proportion of the diversion is from transit, commuter club buses or carpools and greater if a significant number of spin-off vanpools result from the project promotion.

In addition, the expanded market orientation (Markets #1, #2 and #3) has implications for both project implementation and evaluation. The expanded market consists of four times as many commuters as previously conceived. However, the different nature of the trips in the additional intra-suburban market, leads one to expect that a smaller proportion of them are poolable. This is due to an expected shorter commute distance and a greater diversification of origin-destination patterns as well as differences in other commute requirements for these trips (e.g., greater requirements for use of a vehicle during work). This has caused the evaluation to focus on separate commute markets within the corridor.

In addition to the benefits of the immediate impacts of the demonstration, the Bridge District is interested in determining the future potential market for ridesharing, assessing the costs of their promotional efforts, and evaluating the resulting market penetration and impacts on travel behavior. The demonstration will help the Bridge District test the mechanisms of arranging vanpools and help to determine what role the District wishes to play in the promotion and/or leasing of commuter vans.

From a national standpoint, the demonstration of vanpool promotion addresses the UMTA/SMD Program objectives of testing methods to increase area coverage and improve vehicle productivity. Area coverage can be increased by provision of vanpool service between origins and destinations that are poorly or uneconomically served by public transit. Vehicle productivity is potentially increased in two ways: first, by diverting commuters from lower occupancy modes to higher occupancy modes and second, by decreasing the ratio of peak period to base period transit service. High peak to base period ratios of service result in under-used vehicles and drivers during the base period.

Three potential results of increased commuter vehicle productivity should be mentioned, relative to vanpooling: 1) fuel conservation, 2) decreased vehicle pollution, and 3) decreased vehicle congestion. These impacts, as well as those cited above, are addressed in the evaluation.

2.3 PROJECT INNOVATIONS

The idea of vanpooling as an important resource for the nation's commuting needs has been in existence for several years -- beginning with the successful implementation of a vanpool program by the 3M Company of St. Paul, Minnesota in 1973. Since that time, many employers have facilitated vanpooling by coordinating groups, purchasing vans, arranging for insurance,

selecting drivers, leasing the vans to groups of employees and administering the program on a day-to-day basis. In August 1976, representatives of more than 30 companies formed the National Association of Van Pool Operators (NAVPO). The chief purposes of NAVPO are to disseminate information about vanpooling and to assist other companies and agencies in starting vanpool programs. The association also hopes to act as an organized group in requesting vehicle modifications from manufacturers and converters, represent the vanpooling movement to the insurance industry, and seek the necessary legislation at the state and federal levels to promote the growth of vanpool operations. As of January 1977 at least eight states, including California, had enacted legislation to deregulate vanpooling as a mode of commuter travel.

A spring 1978 survey by the Environmental Protection Agency and the Federal Energy Administration found 111 companies and 11 third-party agencies involved in vanpooling programs with almost 2000 vanpools formed. The third-party agencies supply and administer commuter van services to companies and groups of individuals in their area. To date, Commuter Computer Van Pool in the Los Angeles area and the Knoxville Commuter Pool in Knoxville, Tennessee are the two largest area-wide approaches to the promotion of vanpools. In addition to the Knoxville project, the SMD program is sponsoring demonstrations in Minneapolis, Minnesota and Norfolk, Virginia as well as in the Golden Gate corridor.

Commuter Computer in Los Angeles is a private, local and state financed effort to promote both carpools and vanpools. The organization has no direct responsibility for other modes, such as transit. They now have approximately 85 vanpools formed with 110 additional vans on hand. All of the promotion, to date, has been aimed at employers -- via block-to-block canvassing. The marketing effort covers all traffic corridors in the Los Angeles area. The vans used accommodate 10 persons, including the

driver. Passengers ride in airline-type, reclining seats. The driver receives free rides, has personal use of the van during non-commute hours (at \$.15/mile, limited to 500 miles/month) and receives \$30/month revenue from any fares paid by a ninth passenger.* Commuter Computer expects to stay in existence as a third-party vanpool coordinator and administrator.

In Knoxville, Tennessee, a federal grant (\$998,000) has allowed for the purchase of 51 twelve and fifteen-passenger vans. These city-owned vans have been leased to individuals who contract to use the vans in commuter pools. The vanpool program is part of a larger Knoxville Public Transportation Brokerage Service implemented by the University of Tennessee Department of Transportation under the name Knoxville Commuter Pool (KCP). The implementing agency is now located in a newly formed Department of Transportation within the city government of Knoxville. The transportation broker attempts to promote multi-modal solutions (including traditional transit services) for the total sum of all travel needs in the area. They now have 47 vanpools in operation and have sponsored the development of private vanpools as well. Approximately half of these vanpools are for reverse commutes. There are both 12- and 15-passenger vans with bench seating. The driver receives free rides, has unlimited personal use of the van during non-commute hours (at \$.09/mile plus gas) and receives revenue brought in over the minimum of eight paying passengers (i.e., from 0 to 6 fares). The transportation broker is presently attempting to sell the vans to the driver or vanpool groups for continuing private operation.

UMTA has awarded an SMD grant (\$490,000) to the Tidewater Transportation District Commission (TTDC) of Norfolk, Va., to purchase 50 vans and initiate a vanpool program for civilian and military employees at the Navy bases in the Norfolk area. The

* Initially in the program, drivers were receiving the full fare from the ninth passenger.

Norfolk vanpool project involves a public transit operator purchasing vans and leasing them to drivers who work for a large, local employer. For the Norfolk project, the assessment of the effectiveness of TTDC in its brokerage role is an important issue, and, in this sense, the project is similar to the Golden Gate project. However, in this case, the vanpool participants all work for one employer, the Navy, and the project area contains a higher proportion of blue collar workers than the Golden Gate corridor. The Norfolk project will attempt to use local Naval Commands (somewhat analogous to operating divisions within a large corporation) to assist the project in the matching services. It is expected that the drivers will be receiving income (excess fares over 8 passengers) in addition to free rides for themselves and personal use of the van within a certain distance from their residences. The vans accommodate 15 passengers on bench seats.

UMTA has also awarded an SMD grant to the Minneapolis - St. Paul Metropolitan Transit Commission (MTC) to act as a broker in marketing, coordinating and monitoring a ridesharing program including carpools, vanpools, and subscription buses as well as providing information on regular bus service. Three multi-employer sites, ranging in size from 3,600 to 7,700 employees, have been chosen for a concentrated employer/employee marketing effort. All three sites are outside the central business district of Minneapolis/St. Paul; existing bus service to two of the sites is limited. The actual delivery of service other than carpooling will be by contract with a private, for-profit leasing company (for vanpooling) or private bus operator (for custom bus service). These contracts will provide for the payment of the difference between operating revenues and expenses. MTC has a two-year \$335,000 UMTA grant that started in June 1977 and a three-year \$560,000 Federal Aid Urban authorization starting in July 1977.

The Golden Gate vanpool project is implemented by a public transportation agency that operates a toll bridge, bus and ferry services, and is interested in promoting ridesharing by automobile users. Thus, in this case, the implementing agency has direct responsibility for and control over transit services and bridge facilities in the travel corridor. The project began with the use of 35 demonstration vans: 17 ten-passenger vans with airline-type reclining seats and 18 twelve-passenger vans with bench-type seating. Drivers receive free rides, personal use of the vans during non-commute hours (at \$.11/mile, limited to 350 miles/month) and receive no income from passenger fares. Vanpool groups will be "seeded" from project-owned vans used after an introductory period of at least 6 months to privately owned or leased vans on a continuing basis. The Golden Gate Bridge, Highway and Transit District will decide upon its role in promoting and/or administrating vanpools on the basis of the demonstration results.

The following features of the Golden Gate vanpool project distinguish it from other vanpooling efforts:

1. The promotional effort consists of both employer contacts and mass media and is aimed at a specific corridor of traffic.
2. The study corridor area is a high-income residential area with a high proportion of professional and managerial employees.
3. The project is testing the viability of vanpools where the drivers are offered a minimum set of incentives. In addition to a free commute, the driver's personal use of the van is limited to 350 miles per month at a charge of 11¢ per mile. There are no 'excess' fares over some minimum number of passengers collected by the driver.

4. The project is testing the viability of "seeding" vanpool groups from project-owned vans used during an introductory period to privately owned or leased vans on a continuing basis.
5. The project is implemented by an agency that also operates a transit service and receives bridge tolls from automobile users in the corridor area.
6. The project operates bench seat and airline seat equipped vans.

2.4 EVALUATION ISSUES AND APPROACH

The evaluation is structured in the context of assessing the changes in the supply/demand interactions caused by the introduction of vanpool promotion and the impacts of these changes on riders, drivers, employers and the Golden Gate Bridge District. Since there is a defined corridor of traffic which is to be impacted and there is fairly extensive data on the composition of the vehicle and passenger traffic by mode for Market #1 (in the AM commute period), the evaluation is also structured in the context of a before/after analysis of project impact on the corridor traffic. Market #2 is evaluated in a before/after context only to the extent that market research surveys offer an opportunity to request information on previous commute mode. Because there has been no demand for Market #3, the reverse commute market, it is not analyzed at this time.

The evaluation issues can be grouped into the four broad categories of: 1) workability, 2) impacts, 3) productivity and cost-effectiveness, and 4) transferability. Issues of project workability revolve around demonstration setting, design, implementation, levels of service and resulting demand. Given a particular project setting, design and implementation, what

levels of service (including costs to users) and demand result for the vanpools? The basic workability of vanpools as a paratransit mode has already been proven. The Golden Gate demonstration, however, is testing some variations on the theme as already discussed under the section "Project Innovations." The second general issue concerns the impacts that the project has on users, other commuters, employers, the Golden Gate Bridge District, and society at large. Issues of project productivity and cost-effectiveness will focus on the costs to society of promoting and coordinating vanpools versus the costs of subsidizing other transit modes. And the fourth issue of transferability of the project results to other areas is discussed within the context of the previous three issues and summarized at the end of the report. A section of the report addresses each of the itemized issues enumerated below.

2.4.1 Workability

Specific issues concerning the basic workability of the Golden Gate vanpool project are listed in the following sections on 1) demonstration setting, 2) project design and implementation, 3) project level of service and 4) project demand.

2.4.1.1 Demonstration Setting - All of the following questions concern the pre-demonstration setting and exogenous factors that occur during the demonstration that influence the marketability of vanpools and the operation of the promotional program.

1. What are the general geographic, weather, and land use characteristics of the study area? What are the commuting distances involved?

2. What is the availability and pricing of transportation modes for the commuter?
3. What are the a) socioeconomic characteristics, b) commute requirements, c) commute resources, d) travel attitudes and perceptions, and e) commuting behavior of the population in the study area? What trends are discernible from previous history?
4. What is the institutional background within which the project is operating? And what amount of ridesharing promotional activity has taken place prior to the project?
5. What exogenous factors take place during the project concerning:
 - a. transportation availability and pricing and
 - b. non-project related ridesharing promotion?

2.4.1.2 Project Development and Operations

1. What is the history of the grant application process and subsequent design of the demonstration project?
2. What operational and cost experiences does the project have in promoting, coordinating, administering and seeding vanpools? This includes a description of procurement of vans, obtaining insurance, legal problems, labor considerations, pricing, project staffing, promotion, fare collection, van operations and maintenance, backup procedures, driver selection and training, matching services, vanpool seeding arrangements, and interface with other ride-sharing promotions.
3. What is the project's current status and future prognosis?

2.4.1.3 Project Level of Service

1. What are the advantages and disadvantages for a person to become a driver? What is the supply of persons interested in becoming drivers?
2. What success rate does the project have in placing interested applicants for driver and rider positions? How long does it take for an applicant to be placed?
3. For riders, how do all of the following characteristics of vanpool service compare with other modes (auto, carpool, transit):
 - a. coverage
 - b. price
 - c. travel time
 - d. reliability: time schedule
: vehicle / back-up vehicle
: driver / back-up driver
 - e. safety and comfort?How do these characteristics differ between ten- and twelve-passenger vans? between Markets #1 and #2?
4. How available are vans (either through the project or on a private basis) to meet the demand? What assistance is provided to vanpools in the process of seeding to a private van?

2.4.1.4 Project Demand

1. What is the time-series demand for positions in the demonstration vans? What are the socioeconomic and commute characteristics of those who apply and those who eventually become vanpoolers? What are the ridership figures and what is the demand for each type of van?

2. What is the success rate for transferring vanpool groups from demonstration vans to other vans? What types of vanpool groups successfully continue?
3. What is the stability of vanpools and vanpooler mode choice?
4. What is the potential impact of vanpool promotion on commuter mode choice? What is the market penetration of the project on the basis of characterizing general commuters as either poolable or non-poolable?

In discussing types of individuals, commuters can be described according to a) socioeconomic characteristics, b) commute requirements, c) commute resources available, d) attitudes, and e) travel behavior.

2.4.2 Project Impacts

Issues of impacts are grouped by those impacted: 1) users, 2) other commuters, 3) employers, 4) the Golden Gate Bridge District and 5) society at large.

2.4.2.1 Project Impacts on Users

1. Is there less automobile ownership by users (especially drivers) due to vanpooling?
2. What are the cost differences for vanpoolers relative to their previous commute mode?
3. What are the travel time differences for vanpoolers relative to their previous commute mode?
4. Does vanpooling effect users' life styles in some particular ways?

2.4.2.2 Project Impacts on the Society at Large

1. Are there any impacts on highway congestion that can be attributed to vanpooling?
2. Are there any impacts on the use of reserved lanes that can be attributed to vanpooling?

2.4.2.3 Project Impacts on Employers

1. What is the reduction in necessary parking spaces to be provided by employers? Is there less congestion at employer parking areas?
2. Is there any demonstrable impact on vanpool employee attendance at work?
3. What are the costs to employers for participating in the vanpool program?
4. What is the employer's attitude toward the project?

2.4.2.4 Project Impacts on Golden Gate Bridge District

1. What bridge toll losses can be attributed to vanpoolers who have switched from one- or two-person autos?
2. What transit fare losses can be attributed to vanpoolers who have switched from buses or ferries? What are the net trends in transit ridership over time?
3. What impact has the project had on the Golden Gate Club Bus program?
4. What is the impact of the project on mode split for commuters and how does this effect district planning for bridge and transit?

2.4.2.5 Project Impacts on the Society at Large

1. What is the public subsidy cost of the project?
2. What is the reduction in commuter vehicle mileage and associated fuel consumption and pollution?
3. What impact does the project have on downtown congestion and required parking?
4. What impact is there on other ridesharing promotional programs in the area?

2.4.3 Productivity and Cost-Effectiveness

Specific issues concerning the productivity and cost-effectiveness of the project are as follows:

1. What is the vehicle productivity of vanpools by type of van?
2. What are the economics of private vanpooling by type of van?
3. How cost-effective is the use of public subsidy funds for the promotion of vanpooling? How do these costs compare to capitalization and operation of more transit service or highway construction both in terms of passenger seat miles and actual passenger miles?

2.4.4 Project Transferability

The conclusions on transferability of the project results come from information contained in the sections on demonstration setting and project design and implementation:

1. How can project results be accounted for by the travel and socioeconomic characteristics of the market?

2. How have the institutional environment and exogenous factors affected project results?
3. What aspects of the project design and implementation can be singled out as having significant influence on project results?

2.5 ORGANIZATIONAL ROLES

Figure 2-3 provides a diagram depicting the relationships of organizations involved in the Golden Gate Vanpool Project. The demonstration is funded and monitored by the DOT/UMTA Service and Methods Demonstration Program. The grant recipient and project operator is the Golden Gate Bridge, Highway and Transportation District. The project is staffed within the Office of Special Projects directly under the General Manager of the District. This office has been established mainly to promote various forms of ridesharing. The project staff works with residents, employee groups and employers in promoting and developing vanpool groups. The District's Finance Department and Planning Departments are used for accounting and data collection support; these departments charge expenses against the project budget for such services. Outside marketing consultants and computer matching services are also used by the project.

Transportation Systems Center (TSC)* has the responsibility for monitoring and reporting on the evaluation of the project. TSC specifies the desired output and scope of the evaluation and provides technical supervision to its evaluation contractor during the evaluation. Crain & Associates is the evaluation contractor for the Golden Gate project and is responsible for data collection and analysis.

*Transportation Systems Center is the research facility of the United States Department of Transportation.

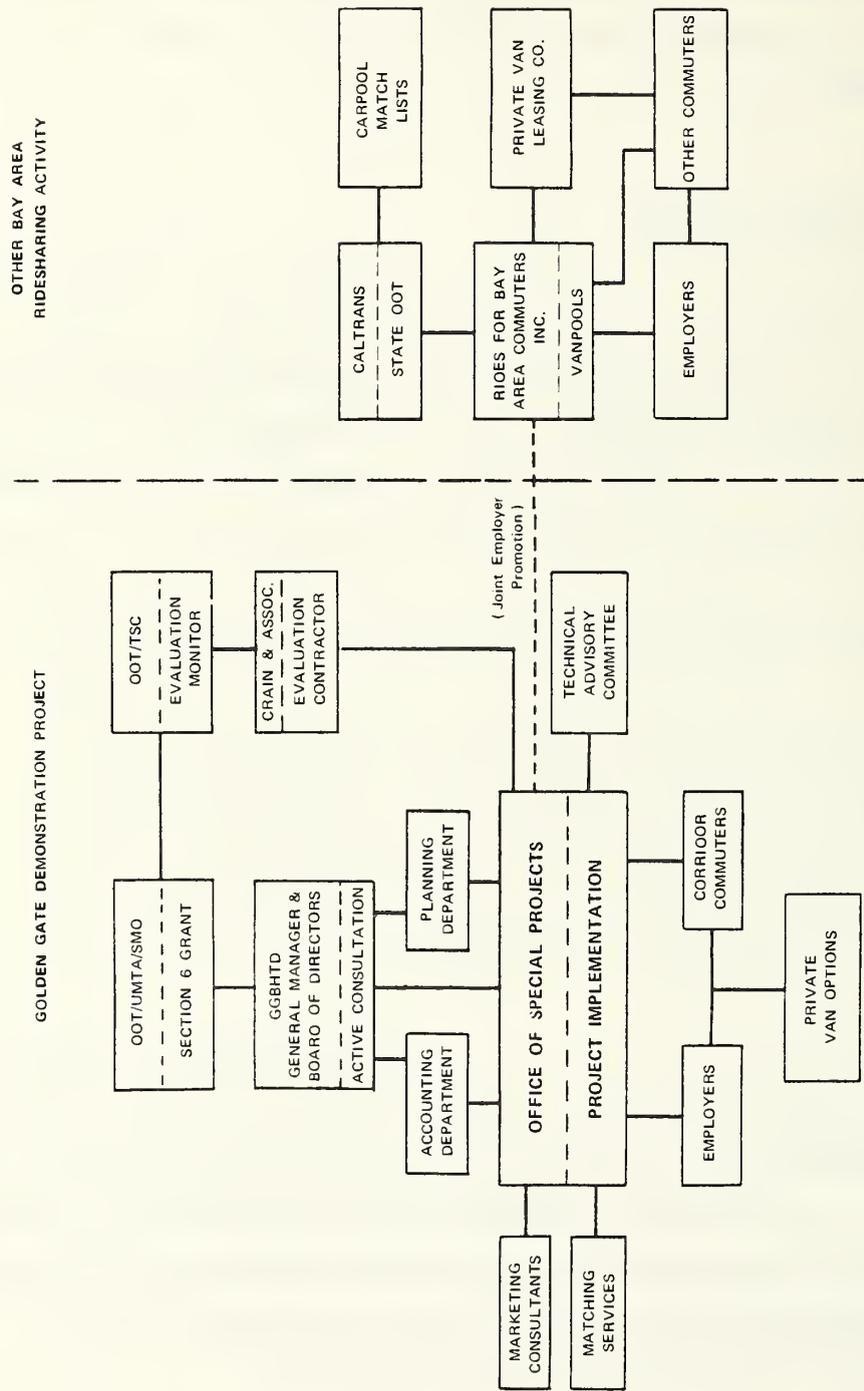


FIGURE 2-3. ORGANIZATIONAL ROLES

All costs of data analysis and report writing are paid for by TSC through its contract with the evaluation contractor. The grantee is responsible for providing the evaluation contractor with most of the information and data necessary to perform the evaluation. In addition to providing all relevant project documents (e.g., progress reports, operating procedures and forms, marketing literature, etc.), the project staff acts as a data collection coordinator.

All costs of data collection, coding, keypunching and data reduction are paid for by the grantee out of project funds.

The technical advisory committee is made up of experts in the ridesharing field from other agencies in the Bay Area. RIDES for Bay Area Commuters, Inc. is an area-wide, third-party vanpool promotional organization that was created in the fall of 1977. RIDES, Inc. has cooperated with the Golden Gate vanpool project in joint employer promotions.

2.6 EVALUATION TO DATE

This report covers the project from initial conceptualization in 1976 through the implementation period of the first half of 1977 and project operations thru June 1978. Evaluation activities that have taken place vis-a-vis each of the four broad categories of evaluation issues already delineated, i.e., 1) workability, 2) impacts, 3) productivity and cost-effectiveness, and 4) transferability, are discussed below. Evaluation activities intended in the future are also noted. The following comments are meant as an overview, and the reader is referred to The Golden Gate Vanpool Demonstration Program Technical Evaluation Plan for a complete discussion of evaluation design. Additional methodological details are discussed in the evaluation analyses and in the Appendices that provide survey materials.

Measurement of Project Workability

The workability of the project has been assessed and measured in the four ways described.

Demonstration Setting (Chapter 3) - Local planning agencies have provided the data on demographics, land use, weather, transportation and institutional characteristics. In particular, the following reports or data sources have been used:

1. U.S. Census for 1970
2. State of California Mid-Census Population Estimates
3. Final Environmental Impact Report on Proposed Toll & Fare Increases; Golden Gate Bridge, Highway and Transportation District; September 29, 1977
4. The Golden Gate Corridor Bus Priority System; Crain & Associates; May 1975
5. "Ridesharing in the Golden Gate Corridor"; John Shellenberger, Jr., GGBHTD; prepared for the California Public Works Association, April 12, 1978
6. Golden Gate Bridge, Highway and Transportation District Special Counts of Vehicles and Occupants Crossing the Golden Gate Bridge During the Morning Commute Period
7. Annual Report of the Rides Program: CALTRANS, District IV, 1977, Lammers & Johnson, January 1978
8. Bus/Carpool Lanes - Route 101 in Marin County; CALTRANS, March 1977.

Project Development and Operations - (Chapter 4) - Data from first-hand observation, interviews with project staff and consultants, and source documents are used to document project operations. Data collection forms used by the staff and vanpool drivers to record operations are supplied in the Appendices.

The Project Level of Service (Chapter 5) - Incentives and disincentives for drivers are described. Basic information on the supply of individuals interested in being drivers and how they come into contact with the project is provided by the application form (Appendix B) and the Initial Vanpooler Survey at time of joining a vanpool (Appendix S). Rider reactions to their drivers and vanpooling have been surveyed with the Supplementary Vanpooler Survey (Appendix T). Completion rates for surveys range from 85-90 percent.

To provide data on time and motion characteristics of the vanpools, on-board trip logs were administered to the total fleet of 25 vanpools over a three day period in June 1978. Unfortunately, the data gathered were almost all 'exceptional', i.e., regular riders not riding, stops for gasoline, etc.. New implementation procedures will be designed so that subsequent on-board surveys will yield better data for analysis.

Project responsiveness to applications and service coverage is initially assessed by comparing dates of application receipt and dates of placement. Requests by vanpoolers for changes have not been large in number; however, experience of the project in this area is presented. A survey of applicants who have terminated interest or who are not successfully matched has not been administered to date, but is planned for a later time during the demonstration.

Coverage is further documented by a presentation of the vanpool ridership by origin-destination and time patterns. At present, there is no information on the commute needs of a random sample of commuters in the corridor to compare with vanpool coverage (either in terms of applications or actual operating vanpools). Such an analysis will await a general commuter survey to be administered at a later time in the demonstration.

Vanpool fares by commute distance are described and compared to other modes available in the corridor. No attempt has been made yet to compare before and after costs for the individual vanpoolers.

And finally, the development of 1) the transition program provided by the project staff and 2) the RIDES for Bay Area Commuters, Inc. Program and 3) the supply of private vehicles are assessed qualitatively to date. At a later time, each seeded vanpool driver or terminated vanpool driver will be interviewed concerning the seeding options that were made available.

The Project Demand (Chapter 6) - Time-series data on applications and vanpoolers is analyzed. Vanpoolers and the total group of applicants are compared by commute requirements. Socioeconomic characteristics, commute resources and requirements of vanpoolers are presented. These will be compared to non-vanpoolers in later evaluation reports. The evolution and viability of vanpool groups to date is described. The proportion of commute trips taken by vanpoolers in their vanpools is reported. No long-term stability or market penetration can be assessed at this time.

3. DEMONSTRATION SETTING

3.1 GEOGRAPHIC AND LAND-USE CHARACTERISTICS

The land area encompassed by the Golden Gate Corridor and five major cities in the corridor have already been depicted in Figure 2-2. This part of northern California has remained sparsely populated and exurban, even rural in style. The 1970 population of Marin and Sonoma Counties was 206,000 and 205,000, respectively. The 1974 Census population estimates for Marin were 214,000 or a 4 percent increase over the 1970 figure. The State Department of Finance has recently reported that in the one year of June 1976-1977, Sonoma County's population grew by 3.8 percent, its fastest growth rate in four years and more than double the state-wide average of 1.7 percent. Marin County's population grew by 1 percent during the same year. The 1977 combined population of the two counties is estimated to be 480,000, or approximately 10 percent of the population of the nine-county San Francisco Bay Area. The land areas of the two counties are 520 square miles for Marin and 1600 square miles for Sonoma. The population density for the two-county region is 226 persons per square mile; the population density for Marin County is only 416 persons per square mile.

The majority of the corridor population lives along U.S. Highway 101 on the east side of the two counties. The major traffic flow in the corridor is along Highway 101 and over the six lane Golden Gate Bridge. The limited capacity of the bridge tends to limit this overall flow during commute periods and to some extent may limit the residential development that produces it. The direction of some of the bridge lanes is switched at commute periods so that four lanes are in the direction of peak flow. Ferry services add some capacity over and above the bridge lanes. The San Rafael-Richmond Bay Bridge provides access to

East Bay employment centers. Highway 101 commuter traffic is also seriously congested at several points north of the bridge due to intra-county commuters.

The dividing line of Marin and Sonoma Counties across Highway 101 is approximately 40 miles from downtown San Francisco. Santa Rosa, the most northern city indicated in Figure 2-2, is 60 miles from downtown San Francisco and constitutes the realistic northern geographic limit for commuting to San Francisco. The primary residential market area for the demonstration vanpool service, then, is between Santa Rosa and San Francisco and is concentrated in the more heavily populated areas with convenient access to Highway 101. The commuting one-way travel time is expected to be less than 75 minutes. The primary destination areas are: 1) south across the bay, 2) east across the bay, and 3) within the north bay counties, themselves.

As stated before, the general terrain of much of the corridor area is quite hilly. Together with low density residential land use patterns, the terrain has caused transit services to be concentrated in what is referred to as the "flat lands," again primarily along Highway 101 and major arterials which feed into Highway 101. The weather conditions consist of mild temperatures all year long with an extensive rainy season from November through March. Other than rain during the winter, commuters do not experience any other harsh weather conditions during their trips to and from work. Temperatures rarely exceed a range of 60°-85° during the day.

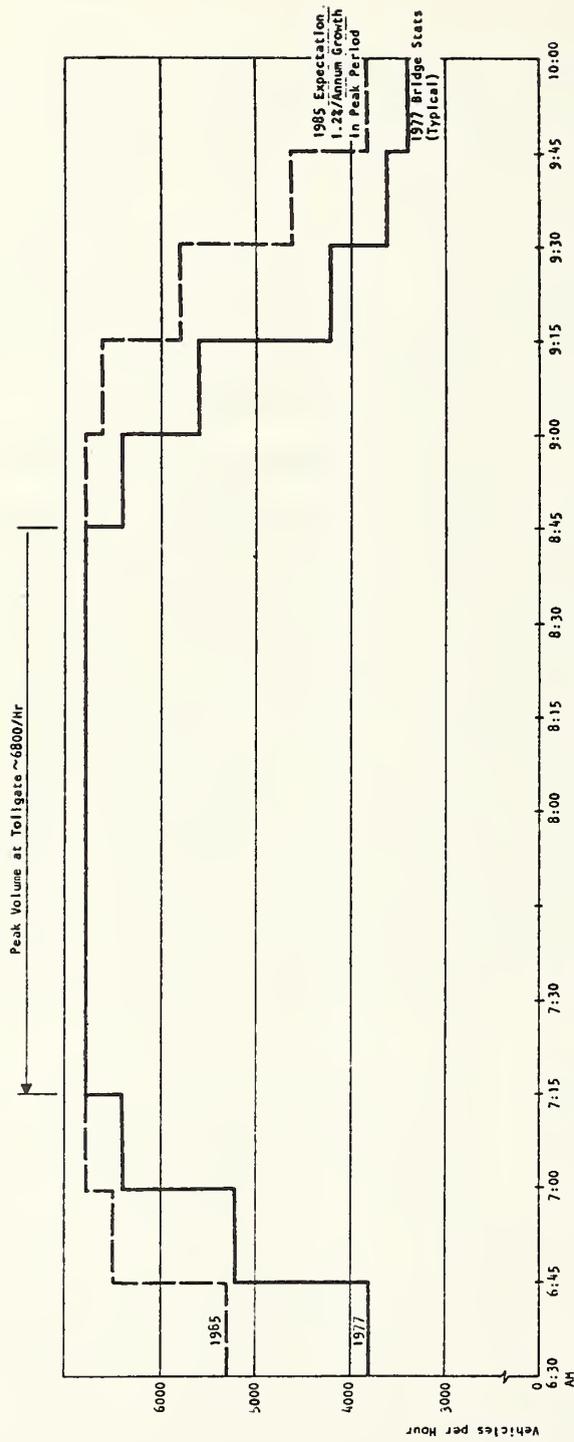
3.2 PRE-DEMONSTRATION TRANSPORTATION CHARACTERISTICS

3.2.1 Automobile/Highways

The automobile availability is very high in Marin and Sonoma Counties. Less than 7 percent of households in Marin had no automobile in 1970. Two-fifths of all households had one automobile and another two-fifths had two. Almost a tenth of all households had three or more cars. The average automobile ownership is 1.5 automobiles per household. The dominance of the automobile as a commuter vehicle affects transportation capital requirements both across the bridge and within the two counties.

During the spring of 1977, an average of 21-22,000 vehicles passed over the Golden Gate Bridge, southbound, between the hours of 6 to 10 AM. The estimated maximum capacity during this four-hour period is 27,200 vehicles -- given a capacity at the toll gate of approximately 6,800 vehicles per hour. The vehicle flow during the 7 to 9 AM peak period is close to this hourly maximum of 6,800. Figure 3-1 compares traffic volume and capacity at the toll gates for each quarter-hour period between 6:30 AM and 10 AM for southbound traffic. The solid line represents 1977 volumes while the dotted line represents projections to the year 1985 based on present growth trends. At present, the traffic volume reaches capacity for a 1-hour and 30-minute period between 7:15 and 8:45 AM.

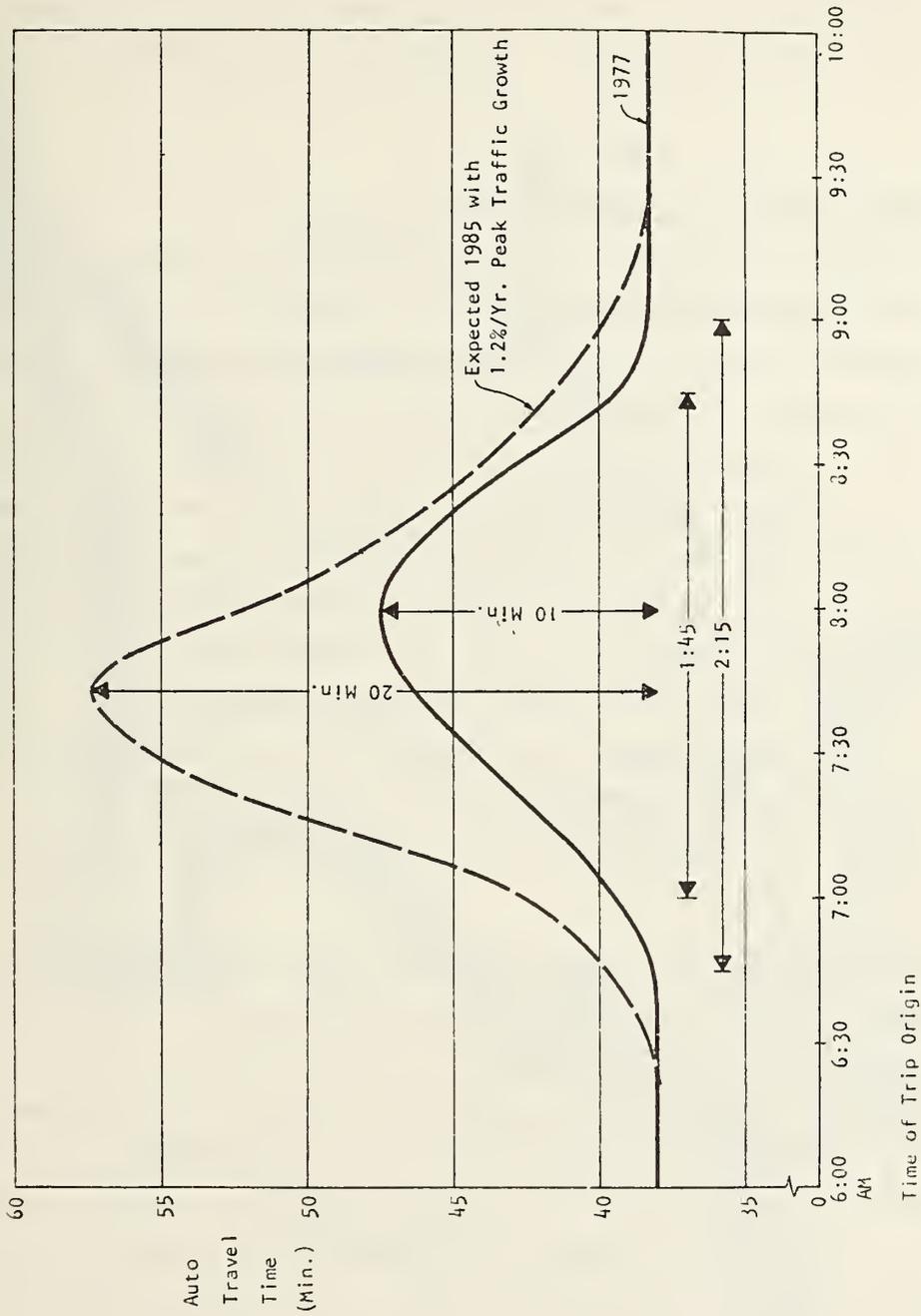
Attainment of capacity causes traffic congestion and travel delay. Figure 3-2 indicates the amount of travel time, including delay, for a driver entering Highway 101 southbound at Freitas Parkway (Terra Linda) at different times of the morning. This 21-mile trip to the San Francisco CBD would normally take 38 minutes without congested delay. The maximum delay of an additional 10 minutes occurs in the middle of the peak period (8 AM). The evening delay northbound is almost twice as long since local traffic in central Marin County is superimposed on transbay



TRAFFIC VOLUMES
Commute Peak
(6-10 AM Southbound)

1977 - 21,700 Vehicles
1985 - 23,500 Vehicles
Projected
Increase: 1,800 Vehicles

FIGURE 3-1. GOLDEN GATE BRIDGE SOUTHBOUND AM
TRAFFIC VOLUME 1977 & 1985 BASELINE



Source: 1977 CALTRANS, 1985 Estimate
Based on Figure 3-1 and East Bay Experience

FIGURE 3-2. TRAFFIC DELAY FOR MORNING COMMUTE (Southbound to San Francisco Financial District from Freitas Parkway On-Ramp)

volumes. Significant travel congestion benefits could be realized through greater vehicle occupancy during the peak periods -- through carpooling, vanpooling, and greater transit use.

3.2.2 Public Transit & Ridesharing

Until 1970, the District was responsible solely for the operation of the Golden Gate Bridge. However, in that year, as a result of several studies which considered alternative responses to increasing traffic congestion in the corridor, the District took its first step into transit with the launching of the M.V. Golden Gate, a diesel powered vessel which offered ferry service between Sausalito in Marin County and downtown San Francisco. In January of 1972, the District commenced subsidized bus services, using excess funds from auto tolls, by taking over the 152 bus commuter service which was losing money for Greyhound. Patronage increased in the short-term from 4,000 to 6,000 commuters and, in the long term, to 8,300 commuters by the spring of 1977. During that period, Golden Gate Transit had increased its vehicle fleet to 248 buses.

Golden Gate Transit operates on a route network extending from Sebastopol and Santa Rosa in Sonoma County in the north to the San Francisco Civic Center and Financial District in the south. Figure 3-3 is a system map showing the major communities served and the two basic routes served in downtown San Francisco. During the peak periods most of the buses are used for commute routes, while during the base period more buses are put into local service within and between Marin and Sonoma Counties. Highway 101 and its parallel service roads form the trunk facility of the 550-mile Golden Gate Transit route network. The various routes branch from the freeway to serve local communities. There are approximately 900 bus stops in the network. Fifty-four of the more heavily patronized boarding points are supplied with bus shelters, and an additional sixty-eight bus shelters are being

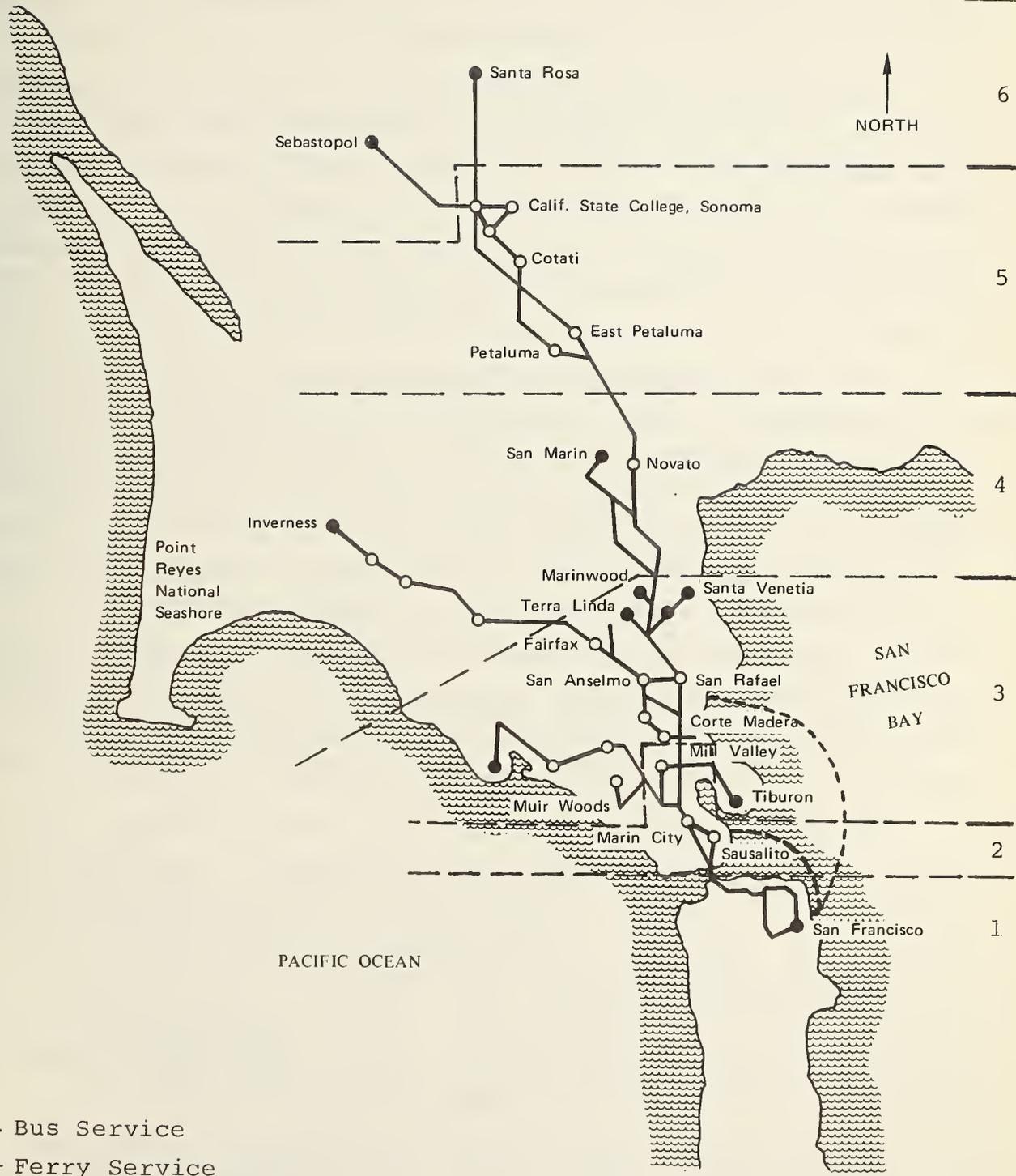


FIGURE 3-3. GOLDEN GATE TRANSIT SYSTEM MAP

constructed. Parking facilities catering specifically to the commuter are provided by the City of San Rafael in downtown San Rafael. All of the air-conditioned buses provide comfortable airline-type seating -- as in charter-type buses.

The District also operates a restricted lane on Highway 101 to increase the speed and schedule reliability of buses. The lane consists of a 3.7 mile concurrent flow lane southbound in the morning and a 7.7 mile combination contra-flow (3.9 miles) and concurrent flow (3.8 miles) lane northbound in the evening. At present, the concurrent flow sections are also open to automobile vehicles with three or more persons.

During the commute hours, approximately 225 buses carry the 8,300 passengers across the bridge for an average of 37 passengers per run --for a greater than 90 percent occupancy factor. Downtown, the bus routes cover the central business district and the civic center area. At this point it is possible to estimate that approximately half of Marin commuters who work in San Francisco work within walking distance of these two routes; the other half of those who commute to San Francisco have work locations not directly served by the two downtown routes. These locations, and maybe even some within the CBD, would require a transfer to MUNI* Transit or BART** in the city.

The Bridge District provides ferry service between two points in Marin County and the Ferry Building in downtown San Francisco. The routes of these ferries are also indicated in Figure 3-3. One 15-knot, 575-passenger vessel operates out of Sausalito and a new fleet of three 25-knot, 750-passenger vessels operate out of Larkspur. In the spring of 1977, a total of approximately 1,500 persons were transported southbound by ferries during the 6-10 AM commute period.

Since its inception in 1972, the history of Golden Gate Transit has been one of ridership growth, of continuing to press

*San Francisco Municipal Railway (MUNI)

**Bay Area Rapid Transit (BART)

additional buses into service, of coping with incessant demands for added service and of developing a modernized ferry service. Revenue from transit fares has traditionally covered half of the transit operating costs. However, spiralling costs and the extreme ratio of peak to base patronage demand has resulted in deficits that cannot be sustained by the Bridge District without automobile toll and transit fare increases and a moratorium on transit growth. During 1977, the operating subsidy cost for each commute bus trip was estimated to average \$.82 for Marin commuters and \$1.66 for Sonoma commuters -- based on Golden Gate Transit's cost allocation formulas.

Consequently, the Bridge District decided to raise both auto tolls and transit fares as of November 1, 1977, along with providing a 20 percent discount for transit commute books. The increased auto tolls and transit fares took effect one month after the first project vanpool began operations. Due to various court suits, however, the future of the bridge toll and transit fares is uncertain at present. The auto toll (round trip) increased from \$.75 to \$1.00 or from \$15.75 to \$21.00 for 21 round trips or one month of commuting. Together with auto tolls, the transit fares from each zone in Marin and Sonoma Counties to San Francisco are shown in Table 3-1.

TABLE 3-1. BRIDGE TOLL AND TRANSIT FARE INCREASES

A. BUS SERVICE (ONE-WAY) - TO SAN FRANCISCO

	<u>Pre-Demo</u>	<u>11/77</u>	<u>20% Disc.</u>	<u>One-way Increase</u>	<u>42 Trip Increase</u>
2. Southern Marin	\$.75	\$1.00	\$.80	\$.05	\$2.10
3. Central Marin	1.00	1.25	1.00	--	--
4. Northern Marin	1.00	1.50	1.20	.20	8.40
5. Southern Sonoma	1.25	2.00	1.60	.35	14.70
6. Northern Sonoma	1.50	2.25	1.80	.30	12.60

B. FERRY SERVICE (ONE-WAY) - TO SAN FRANCISCO

Sausalito - Weekday	\$.75	\$1.00	\$.80	\$.05	\$2.10
Larkspur - All Days	1.00	1.25	1.00	--	--

C. AUTO TOLL (ONE-WAY) \$.375 \$.50 -- \$.125 \$5.25

The increase is greater for automobile commuters from zones two and three; starting with zone four, the increase is greater for bus commuters. These fare changes are intended to 1) increase revenue, 2) maintain transit revenues at the point of covering half of operating costs and 3) reflect the additional cost of long-haul transit trips. This is the first bridge toll increase since 1974 and first transit fare increase since inception of the transit services in 1972.

The District has also instituted a program of club buses in which the District arranges with a charter bus operator for a bus to be used by a group of commuters. The District pays 50 percent of the cost while the riders pay fares to cover the remainder. In 1977 there were twenty club buses in operation with approximately 800 commuters using them. The club bus picks up the commuters, usually all employees of one organization, at either central collection points or at their residences and offers a guaranteed seat. Most of the commute bus runs are in areas that otherwise are not served by Golden Gate Transit. One of the rationales for the program is to limit the peak period demand for transit capitalization on the part of the District. One limiting factor is the ability of private providers to absorb the peak period demand and balance it with other mid-day charter business. Of course, to date, the cost to the District is less than what it would cost to provide the service itself. In 1977 club bus subsidy costs to the District averaged \$.51 per commuter one-way trip. However, lately, there has been some discussion within the District as to the proper funding level for the club bus operation. The exact tradeoff for the District and users between sponsorship of club buses vs. vanpools has as yet to be decided as a policy. At present, both promotions are in effect.

The Bridge District also promotes carpools and vanpools. Vehicles with three or more passengers may pass across the bridge free from 6-10 AM and may also use the concurrent flow sections of the restricted lane on Highway 101. During an earlier promotional effort, the District was also able to help form

approximately twenty vanpools. The average round trip distance for these vanpools was 81 miles.

Beginning in April 1976, the District's bus drivers were on strike for a period of two months -- one of the cited reasons being the District's planning of a vanpool demonstration project. As an incentive for carpools, commuter groups of three or more were offered morning and evening use of the reserved concurrent flow bus lane and free passage across the bridge from 6-10 AM. With the aid of a joint Marin County and District matching program, commuters pooled their trips so effectively that congestion levels were actually reduced. Following the strike, many carpools remained together, a fact reflected in Figure 3-4.

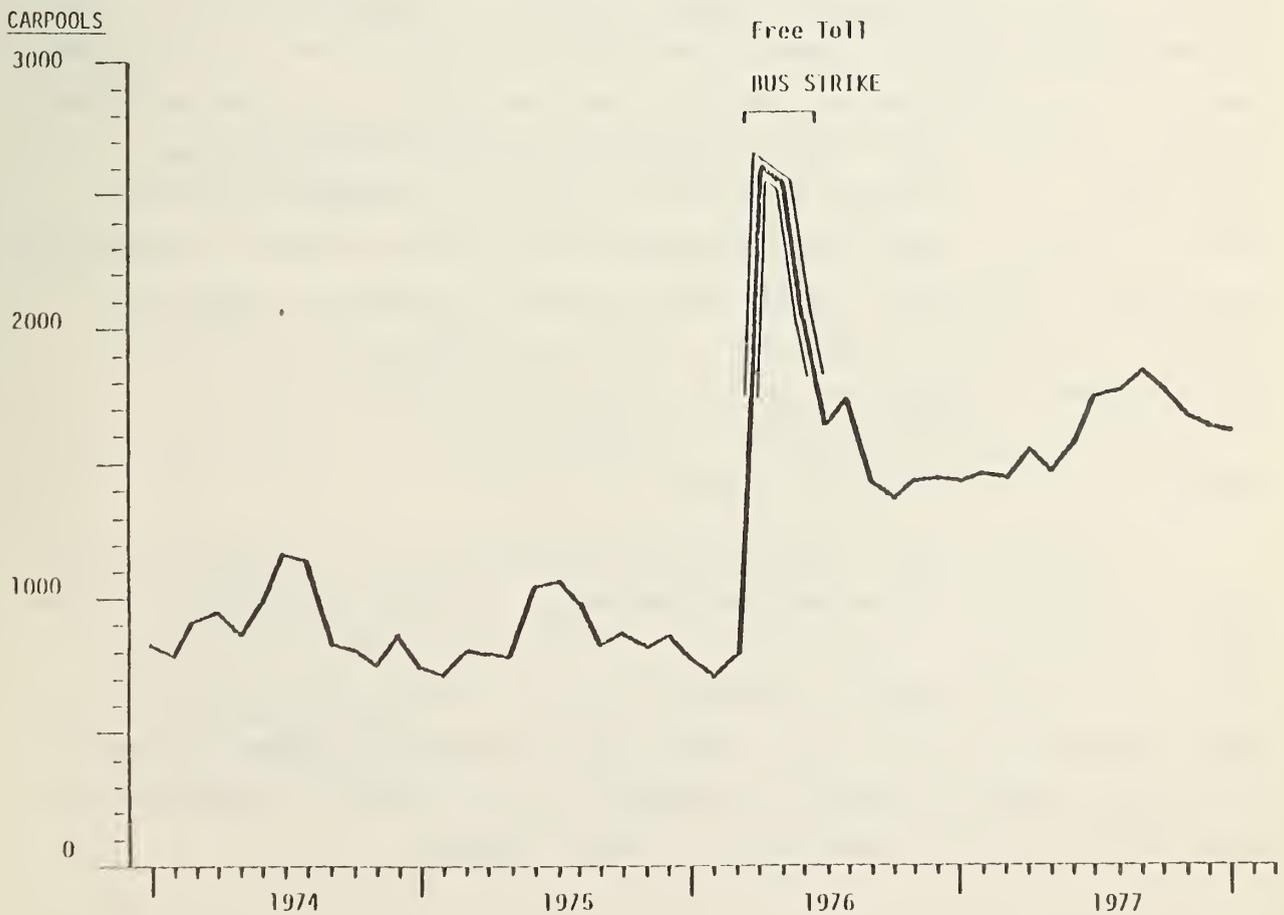


FIGURE 3-4. CARPOOL HISTORY OF GOLDEN GATE BRIDGE DURING THE COMMUTE PERIOD (vehicles with three or more persons from 6-10 AM, southbound)

The District has continued its reserved lane and free toll policy for commuter pools of three or more during the commute period.

3.3 COMMUTER MARKET - MODE CHOICE

The vanpool project could conceivably serve the needs of 1) those commuters who cross the bay to the San Francisco Peninsula, 2) intra-county commuters, or 3) reverse commuters. The evaluation will attempt to analyze all of the markets that are eventually serviced by the project. At this time, mode choice data is available on commuters to the peninsula.

Table 3-2 presents demographic and traffic data from the 1970 U.S. Census on Marin, Sonoma and San Francisco Counties, the San Francisco SMSA and all SMSAs together. Aggregating the data for Marin and Sonoma Counties would tend to distort the picture due to basic differences between the two counties in population density, land use and socioeconomic characteristics of the population. For example, over two-fifths of Sonoma residents live in "rural" areas vs. less than one tenth of Marin residents; the median income for Marin families was \$14,000 in 1970 vs. \$10,000 for Sonoma families. And while approximately half of Marin workers commute to a job outside of their county (36 percent to San Francisco), only a quarter of Sonoma workers commute to a job outside of their county.

In reality, the commuter market population in Sonoma County (along Highway 101) resembles the Marin population more than the rural Sonoma population. Thus, in the above table, the data cited for Marin County provides the most accurate picture of the market population for the Golden Gate vanpool program. Given this fact, several important aspects of the demonstration market area stand out in comparison to other areas:

TABLE 3-2.

GOLDEN GATE CORRIDOR
DEMOGRAPHIC - TRAFFIC DATA
(1970 Census)

	Marin County	Sonoma County	S.F. County	S.F.-Oak. SMSA	All U.S. SMSAs
Population	206,000	205,000	716,000	3,110,000	127,417,000
Age (%)					
Under 20	35%		25%	33%	
20-44	37		37	35	
45-64	21		24	22	
65 and over	7	13%	14	10	9%
Race (%)					
Caucasian	96%	99%	71%	83%	86%
Education (% persons, 25 yrs old and over)					
College Graduates	27%	11%	17%	17%	
High School Graduates	79	64	62	66	
Employed (16 yrs old & over)	81,000	68,000	318,000	1,270,000	70,000,000
Occupation (%)					
Professional/Managerial	40%	26%	25%	27%	
Sales/Clerical	31	25	36	31	
Craftsmen/Machinists	14	26	19	24	
Laborers & Others	15	23	20	18	
Median Family Income	\$14,000	\$10,000	\$10,500	\$11,800	
% Families with \$15,000+ Income	44%		27%	32%	
Autos Available (% of Households)					
None	7%		40%	19%	
1	44		45	45	
2	41		13	30	
3 or more	8		2	6	
Mode to Work (%)					
Auto Driver	70%	78%	42%	65%	
Auto Passenger	11	7	7	9	
Public Transit	8	2	35	15	
Walk/Work at Home/Other	11	13	16	11	
Place of Work (%)					
San Francisco CBD	16%	↑			
San Francisco Non-CBD	20	24%			
South/East Bay/Other	12				
Marin	49	↓	1%		
Sonoma	3	76			

1. The study area has a slightly younger population, is more caucasian, has attained significantly higher educational levels (one-quarter of those over 25 are college graduates), and a very high proportion of all occupations of those who work are white collar (almost three-quarters). The last two characteristics are expected to be even more prominent among those who commute to San Francisco.
2. Family income in the study area is very high with a 1970 median of \$14,000 and with 44 percent of all families having an annual income in excess of \$15,000.
3. Automobile ownership is also quite prevalent in the study area with only 7 percent of all households not owning an automobile in 1970. Significantly, from a commuting standpoint, half of all households had two or more automobiles -- indicating the availability of automobiles for commuting purposes.
4. The above factors all contribute to a high automobile usage for the trip to work (81 percent) and a relatively low mode split for public transit (8 percent in 1970).

3.3.1 Market #1: Transbay, Southbound Commuters

Table 3-3 presents a more detailed account of the volumes and mode split of transbay travelers during the morning commute hours (southbound). The data presented in the table is from the spring of 1977, six months before project vanpools began operation and is based on semi-monthly special counts at the bridge and patronage data from the ferries. If one looks at the data, in detail, there are interesting relationships that are relevant to the stated goals of decreasing congestion on the bridge.

TABLE 3-3.

VOLUMES AND MODE SPLIT OF GOLDEN GATE TRANSBAY TRAVELERS BY PEAK COMMUTE HOUR, SOUTHBOUND - SPRING, 1977 (March/April)

Mode	Vehicles				Person Trips				Mode Split (Total Person Trips)								
	Time (am)	6-7	7-8	8-9	9-10	Total	6-7	7-8	8-9	9-10	Total	6-7	7-8	8-9	9-10	6-10	7-9
1 Person		2500	4600	4900	3500	15500	2500	4600	4900	3500	15500	.40	.30	.46	.58	.40	.36
2 Persons		625	1375	1175	775	3950	1250	2750	2350	1550	7900	.20	.18	.22	.25	.21	.19
3-5 Persons		275	575	275	175	1300	900	1900	900	550	4250	.15	.12	.08	.09	.11	.11
6+ Persons		5	15	10	10	40	40	110	75	75	300	.01	.01	.01	.01	.01	.01
All Autos		3405	6565	6360	4460	20790	4690	9360	8225	5675	27950	.76	.61	.77	.93	.73	.67
Public Buses		35	120	55	15	225	1275	4625	2025	375	8300	.21	.30	.19	.06	.22	.26
Club Buses		0	10	5	0	15	0	400	100	0	500	0	.03	.01	0	.01	.02
Ferries		-	-	-	-	-	175	875	400	50	1500	.03	.06	.03	.01	.04	.05
Transit		35	130	60	15	240	1450	5900	2525	425	10300	.24	.39	.23	.07	.27	.33
Subtotal		3440	6695	6420	4475	21030	6140	15260	10750	6100	38250	1.00	1.00	1.00	1.00	1.00	1.00
% of 4 Hr. Total		16%	32%	31%	21%	100%	16%	40%	28%	16%	100%	1.38	1.43	1.29	1.27	1.34	36.40
Persons/Vehicle: Autos												1.73	2.15	1.61	1.35	1.75	
Buses																	
Autos & Buses																	

As already discussed, while the commute period may extend from 6 to 10 AM, the peak traffic period is primarily during the hours of 7 to 9 AM. And while the peak vehicle flow is uniform over the two hours, the peak period for person trips is between 7 and 8 AM when some 15,000 persons (or 50 percent more than the 10,000 persons from 8 to 9 AM) cross the bay. A greater amount of ridesharing during the 7-8 AM hour results in only a slightly higher number of vehicles during that hour (6,700 vs. 6,400 from 8-9 AM). This ridesharing can be attributed to a combination of greater automobile occupancy (1.43 from 7-8 AM vs. 1.29 from 8-9 AM), transit availability (130 buses from 7-8 AM vs. 65 buses from 8-9 AM) and transit use (39 percent transit mode choice from 7-8 AM vs. 23 percent transit mode choice from 8-9 AM).

Consequently, from the standpoint of bridge congestion, there appear to be three different sub-markets to be affected by commuter ridesharing promotions. The first market segment is comprised of the peak hour travelers who already demonstrate a relatively high amount of ridesharing (only 30 percent drive alone); the second market segment are those who travel during the 8-9 AM hour of the peak period and demonstrate a low amount of ridesharing (46 percent drive alone); and the third market group are commuters who cross the bridge at other times, who are not affected by peak period congestion and who demonstrate even less ridesharing (49 percent drive alone). Within the third segment, a greater amount of ridesharing (particularly by carpools of 3+ persons and by transit) is going on during the 6 to 7 AM period as opposed to the 9 to 10 AM period.

All of the socioeconomic and travel behavior data presented so far applies either to all residents of the area or all persons crossing over the bridge during particular hours. There is very little data on the Golden Gate commuters as a distinct subgroup. The District has conducted surveys on board their buses and ferries but has never surveyed automobile drivers or household residents. The District has also done a license plate survey of

automobiles to determine the county of origin. Table 3-4 presents the available data on bus and ferry riders using the services during the commute period. As expected, bus and transit commuters have significantly more income and more autos and are more likely to be males than the general population in the Bay Area.

Based on transit rider surveys and Bridge license plate checks, it has been estimated by the District that 50 percent of transbay travel during the commute period is between southern/central Marin County and northeast San Francisco and that 90 percent is tied to origins and destinations within San Francisco, Marin and Sonoma Counties. Not all of this travel is on a regular commuting basis, but it is reasonable to extrapolate that approximately 33,000 to 36,000 persons regularly commute southbound across the bay -- or 85 percent to 90 percent of the 39,000 southbound transbay trips from 6-10 AM. The auto and transit catchment areas are fairly coterminous in the peak period; the 90 percent catchment is slightly more constricted for transit.

3.3.2 Market #2: Intra-Suburban Commuters

Presently, there is no mode share data for Market #2 that is comparable to that available for Market #1. Table 3-2 indicates that a total of 149,000 residents of Marin and Sonoma were employed in 1970. Approximately 88 percent (or 131,000) of these workers had to travel in vehicles to their work site. Given the increases in population already cited, our present estimate of the total number of Marin and Sonoma employees in 1977 is 175,000. Approximately 155,000 of these employees would use a vehicle to get to work. Since we estimate that roughly 35,000 of these employees travel south across the Bridge, this leaves 120,000 employees who commute within the North Bay or to the East Bay. These estimates, then, indicate that Market #2 is somewhere between three and four times as large as Market #1.

TABLE 3-4 .

SOCIOECONOMIC PROFILE OF
GOLDEN GATE TRANSIT COMMUTERS

	1975 <u>Marin/SF Commuter Bus</u>	1977 <u>Larkspur Ferry Commuters</u>	1978 <u>Vanpool Commuters*</u>
<u>Income (%)</u>			
Under \$10,000	14.8	8.4	3
\$10,000-\$14,999	15.7	15.2	11
\$15,000-\$24,999	30.6	24.3	40
\$25,000 or over	38.9	52.1	45
<u>Automobiles (%)</u>			
None	0	2.1	-
One	46.8	41.2	33
Two	46.8	46.4	51
Three or more	6.4	10.3	16
<u>Sex (%)</u>			
Male	63.2	73.0	63
Female	36.8	27.0	37
<u>Age (%)</u>			
Under 25	12.7	7.3	5
25-44	53.4	64.7	N/A
45-59	31.4	23.0	N/A
60-64	1.7	2.5	N/A
65 +	.8	2.5	N/A

*The Vanpool Survey contained age ranges quite dissimilar from bus and ferry data and, therefore, not applicable (N/A) for this table.

3.3.3 Summary

Minimal data is available for analysis of that segment of the total commute population which can be expected to be served by vanpools in competition with autos, carpools and transit. As will be discussed more fully in later sections of this report, vanpools become competitive (in terms of cost and travel time) with carpools and transit only beyond certain commute distances and depending on the origins and destinations and how well they are served by transit.

It is anticipated that the District, in conjunction with the project evaluation, will perform a general marketing survey in the Golden Gate Corridor by way of a household survey. Such a survey will investigate the commute characteristics of all commuters in the corridor. A pre-demonstration marketing survey was not implemented; however, this is not considered to be a problem for the evaluation. At a later time vanpoolers will be asked about their pre-demonstration commute mode and the general commuters will be asked about their current mode at the time of the household survey. The intent will be to collect comprehensive and comparable sets of data on general commuters as well as vanpoolers to analyze the potential for the vanpool penetration of the market area.

Concerning analysis of the pre-demonstration market to be done at a later time, all commuters will be broken-down by origin-destination patterns into 1) those who live in Marin and Sonoma Counties and commute south across the bay, and 2) those who live and commute within Marin and Sonoma Counties, or east across the bay.

The commuter market for each of the above origin-destination patterns will be further broken down by primary commute mode. The distribution of individual socioeconomic characteristics, commute requirements, and travel attitudes and cross tabulations of these characteristics will be reported for each sub-market. The number of commuters in each sub-market will be estimated from census and survey data.

3.4 INSTITUTIONAL BACKGROUND

There are many institutional organizations that have some connection with or interest in the Golden Gate demonstration. The federal government, through UMTA, the Federal Highway Administration and the Federal Energy Administration, has been interested in the promotion of vanpools and ridesharing and evaluation of promotional programs. Likewise, the State of California, through CALTRANS has allocated \$2 million for ridesharing programs statewide, \$600,000 in the Bay Area alone. This includes carpool promotions, through employers and roadsigs, and matching services. In 1977, CALTRANS received 14,000 applications for assistance and placed 2500 in a ridesharing group. CALTRANS is also performing market research studies and intensive promotion in an area of Contra Costa County in the East Bay.

In 1977, the CALTRANS Ridesharing Program and the Bay Area Ridesharing Steering Committee sponsored the formation of a nonprofit corporation designed to implement and administer a vanpool program for the Bay Area. RIDES for Bay Area Commuters, Inc. was officially formed in September 1977, the first month that the Golden Gate Vanpool Demonstration Project began with the full-time staff. The Golden Gate project operations have preceded the area-wide program by about six months. RIDES, Inc. is similar to the Minneapolis vanpool program in that a private

leasing company is used for vehicle supply and fleet administration. The promotional program is aimed primarily at employees through large employers or large concentrations of employers. The total first year budget for RIDES, Inc. is \$165,000 with the bulk of the funds coming from the California State Energy Commission.

Since completion of the Golden Gate Bridge in 1937, the Golden Gate Bridge, Highway and Transportation District has accepted responsibility for the flow of traffic on Highway 101 between Marin City in Marin County and the end of Doyle Drive in San Francisco's Marina area. This acceptance of responsibility has required an ever-increasing level of action with respect to facilitating traffic flow. The District has been acclaimed in recent years for its multi-modal approach to facilitating commuter travel via automobile, carpools, vanpools, club buses, public buses and ferries. The District, obviously, enjoys a position of controlling the only access routes from the corridor to downtown San Francisco with the toll bridge, special highway lane control and diversified transit services.

In 1969, the District retired the original bonds for the construction of the bridge. During the 1960's, the District carried out several studies exploring roadway and bridge expansion alternatives for an expected growth in commuter volumes. Strong public opposition was voiced to a second bridge or bridge deck and to an increase in highway lanes. As a result, the District entered into transit operations in order to limit the number of commute period vehicles requiring roadway space. Excess auto tolls, over the costs of operating and maintaining the bridge, were used to subsidize, first, a small ferry service from Sausalito and, later, bus services. A formula has evolved over the years by which Marin and Sonoma Counties subsidize the base period bus services while the District subsidized commute period service. UMTA grants were used for capital expenses.

When the District first began bus operations in 1972, commute traffic was reduced to 1969 levels. Traffic levels continued to increase as did the demand for more transit services. With the expenditure of \$22 million dollars in increased transit capital and addition of more commute buses, officials of the City of San Francisco requested that the District plan for more ferry services in lieu of adding buses to the already crowded downtown streets. Subsequently, the District (together with UMTA) has spent another \$38 million for a ferry system from Larkspur to downtown San Francisco. This system has as yet not fulfilled expectations in terms of costs or patronage.

In spite of recent increases in bridge tolls and transit fares, the District nonetheless faces an annual deficit in excess of \$2 million for each of the next two fiscal years and more in succeeding years. Reserves built up in the years prior to transit operations from tolls are diminishing and the District neither has, nor seeks, a taxing capacity. These are the hard facts even though over 50 percent of transit operating costs are paid for by revenue from the farebox (an unusually high proportion) and base period, intra-county transit is subsidized by local tax funds.

The increase in tolls and fares and the way in which expected revenues were allocated has sparked a political controversy for the District and within its Board of Directors. Legal challenges are being made in the courts, and the long-term future of the District's financial and operating base are being threatened.

It is within this context that the District has been pursuing ridesharing promotion in the hopes that traffic congestion can be contained with little capital or operating expenditure.

3.5 EXOGENOUS FACTORS

Factors exogenous to the project that have occurred to date and that have potentially impacted the project results are the following:

1. The auto toll and transit fare increases of November 1977
2. A 37% expansion of the club bus system during the year 1977.
3. The development of RIDES, Inc.

Strictly speaking, the toll and fare increases occurred after the project began operations. However, practically speaking, commuters were aware of the pending increases before the project began and most project promotion has occurred with the increases in effect. The increases, however, will be noted in any discussion of long-term trends of ridesharing in general, i.e., including carpools.

In December 1977, four months after the start of the project, the District decided to fund two more commuter club buses in what would be considered an overlapping market of the vanpool project. Consequently, an expansion of the subsidized club bus option was competing with the vanpool option for 80 commuters in two areas. Club bus fares are lower than vanpool fares which are lower than Golden Gate Transit fares. The impacts of this policy and the implications for evaluating vanpool demand are difficult to assess.

The club bus program, over a two year period, has already organized some 1000 commuters, who work for large employers not well served by transit, into a mode that is very similar to vanpooling service. Thus, while unsubsidized carpooling, unsubsidized vanpooling, and unsubsidized club buses can be compared and evaluated within the context of "ridesharing," subsidized club buses present themselves not as just another "ridesharing" option, but rather as a personalized service that also receives a subsidy incentive comparable to the less personalized, public transit option.

The size of the club bus program (650 commuters) is significant relative to the expected development of vanpool demand in Market #1 during the demonstration period. Thus, in addition to evaluating vanpool demand in competition with options existing before the demonstration, the timing, extent, and location of additional club bus options made available by the District during the project will be described in particular.

RIDES, Inc. adds a whole new, additional force for promoting vanpools in the Bay Area. Its resources, as they are utilized in cooperation with the Golden Gate project for joint employer promotion, will impact the growth of vanpool demand in the project corridor. Applications for the project corridor that result from joint promotion or RIDES, Inc. promotion, by itself, will be coded and reported as such. An analysis of promotional effort on the part of both organizations along with separate counts of demand from different sources should allow us to separate the direct effects of each organization. The indirect impact of RIDES, Inc. on ridesharing awareness may prove to be more difficult to analyze.

4. PROJECT DEVELOPMENT AND OPERATIONS

This chapter is divided into three sections to describe and analyze:

1. The grant application and project design process,
2. The project implementation and operations to date, and
3. The current status and short-term prognosis for the project.

A time history of events is provided in Table 4-1.

4.1 GRANT APPLICATION AND PROJECT DESIGN

Several developments over the last five years have caused transportation and other planning bodies in most metropolitan areas to experiment with commuter ridesharing promotion:

1. The Middle East oil embargo and the fuel crisis during the winter of 1973-74,
2. The regulations for air quality standards established by the Environmental Protection Agency as mandated by Congressional legislation,
3. The continuing commuter peak period congestion problem which aggravates fuel and pollution problems as well as delaying commuter travel, and
4. The increasing expense of transportation capital facility investment and operating costs of highways and transit designed to accomodate the peak commuter demand.

The last two problems are the ones that most moved the Golden Gate Bridge, Highway, and Transportation District, in the spring of 1976 to apply for federal funding for the project demonstration.

TABLE 4-1.
OVERALL TIME HISTORY OF EVENTS

Original Grant Application	April 28, 1976
Revised Grant Application	August 9, 1976
Preliminary Grant Approval	Fall, 1976
13c Agreement Finalized	February 2, 1977
Final Grant Approval	March, 1977
Vans Purchased	April 11, 1977
Insurance Confirmed and Rates Stated	July 1, 1977
Vans Delivered	August, 1977
Three Full-Time Staff Members	September 3, 1977
Decision that Drivers Will Not Obtain Their Own Insurance	September, 1977
First Vanpool in Operation	October 3, 1977
Three-Level Insurance Rates Confirmed	October, 1977
Minimum Number of Riders Required for a New Pool Reduced to 7 for Luxury and to 8 for Deluxe	November, 1977
Seat Reservations No Longer Required	November, 1977
Two Additional Staff Members	
--Part-Time	November, 1977
--Full-Time	January, 1978
Insurance Policy Received	December, 1977
Minimum Number of Riders Required for a New Pool Reduced to 5	February, 1978
Attorney's Comments on Insurance Policy	January, 1978
Meeting with Insurance Carrier	March, 1978
Driver Training Course	April 1, 1978
Expected Project Termination Date	June 30, 1979

The original grant application was submitted in April 1976. As indicated earlier, this coincided with a strike by the District's bus drivers; the strike involved many issues, the proposed vanpool project being one of them. As stated earlier, carpooling on the part of commuters actually reduced the congestion levels. After UMTA review of the original application, a revised application was submitted in August 1976. The primary revision was a reduction in project budgeting (from \$815,000 to \$685,000) which was made possible by using the cash flow revenue that would come from the portion of vanpool fares charged for depreciation. Table 4-2 provides the project budget as planned in the final grant application. Staged deliveries of vans was included as an element of the plan. Subsequently, UMTA suggested that the \$685,000 budget be maintained but that only 35 vans (instead of 50 vans) be purchased with funds from UMTA. The other 15 vans (equal in value to the projected cash flow) could be purchased later with the depreciation fund that would accumulate. Thus, the depreciation revenue is not required as cash flow to cover any other part of administration expenses. This essentially allows the project options in its use of the incoming revenue, e.g., using it for subsidization of vacancies, promotional expenses or purchase of additional demonstration vans.

Preliminary grant approval by UMTA was made in the fall of 1976. This preliminary approval allowed for staff negotiations on 1) a 13(c) agreement with the transit union (the only requirement left for final approval), 2) purchase of the vans, and 3) purchase of insurance. During this period, one person in the Planning Department was coordinating the grant finalization. However, other management and legal staff were involved in the negotiations for a 13(c) agreement.

TABLE 4-2.
PROJECT BUDGET, REVISED GRANT APPLICATION

Administration

Staff

Project Manager	\$ 3,977.01
Assistant Project Manager	69,846.24
Senior Planner	3,492.31
Administrative Assistant	47,631.59
Technical Assistant	44,629.51
Assistant Planner	2,348.92
Clerk/Typist	<u>27,732.54</u>

Total Staff \$199,658

Travel (Vehicle & Operating Costs) 5,000

Materials, Supplies, Printing 5,000

Servicing, Repairs & Maintenance, Fuel 3,000

Insurance 6,300

Professional Services

Legal	\$ 7,500
Fleet Administration	5,000
Marketing	<u>74,000</u>

Total Professional Services 86,500

Overhead (10% of Salaries) 19,966

Contingencies 40,000

Total Administrative Costs \$365,424

Capital Requirements (50 vans @ \$9,000) 450,000

PROJECT TOTAL.....\$815,424

Operating costs charged to van users will include amount equivalent to sinking fund necessary to replace vans. Use of that cash flow will reduce needs for capital by an estimated 131,328

REQUEST FOR FUNDING.....\$684,096

Negotiations for the 13(c) agreement had commenced in the previous July and presented the greatest delay in finalization of the grant. Five labor unions were identified by the U.S. Department of Labor as potentially impacted by the proposed project:

1. The Amalgamated Transit Union's (ATU) local chapter of bus drivers for Golden Gate Transit,
2. The International Association of Machinists and Aerospace Workers (IAMAW) who did the maintenance and repair work on District vehicles,
3. The Inland Boatmen's Union (IBU) workers who worked on the District's ferries,
4. The Marine Engineers Beneficial Association (MEBA) workers who maintained and repaired the ferries, and
5. The local ATU chapter for workers of the MUNI Transit System in San Francisco.

The last group did not perceive any personal concerns at stake and, therefore, did not participate in the negotiations. The two marine worker unions indicated some concern about the vanpool project competing with the ferries for patronage. The primary unions concerned were the Golden Gate chapter of the ATU and the IAMAW.

The primary issue, of course, concerned the potential impact of competition between fixed-route services and the paratransit demonstration. Two 13(c) agreements had previously been negotiated with unions in two other federally sponsored demonstrations in Knoxville and Norfolk. In both of those cases, the agreements stated that in addition to guarantee of the present level of transit employment, the projects would not form vanpools in origin-destination patterns already served by public transit. The grantees in both cases were willing to agree to these stipulations because, geographically, there were other important areas to be served by vanpools.

The Golden Gate District, however, was unwilling to accept such terms because it was exactly the same corridor that the District wanted to serve with both public transit and vanpools. The second issue of contention was the wording of statements concerning the protection of bus driver employment.

The negotiations took seven months and a 13(c) agreement was signed in early February of 1977. Appendix I provides a copy of the agreement and a "side letter agreement" clarifying the scope and extent of the District's intent and obligation with respect to the key paragraph on interpretation of potential causes of decline in employment levels.

Relative to the issue of serving the same market, the District has obtained for itself the freedom of deploying both transit operations and paratransit promotion for the same overall market. Together with clauses protecting the bargaining unit against any impact due to the project, this would appear to serve the purpose of guaranteeing present levels of employment and providing management with flexibility in utilizing a mix of modes for transportation services.

Given a 13(c) agreement in February, 1977, the project received final DOL and UMTA approval in March. The total grant application and approval process took approximately one year.

4.2 PROJECT IMPLEMENTATION AND OPERATIONS

This section of the report describes the initial implementation and subsequent development of the project during the first year. Project operations are discussed under the following fifteen categories of operational elements:

1. Project Staffing & Consulting Services
2. Project Accounting
3. Van Acquisition & Preparation

4. Insurance, Legal & Labor Developments
5. Pricing
6. Marketing Approaches
7. Applications, Office Procedures, and Evaluation of Marketing Approaches
8. Matching Processes
9. Driver Selection, Training, and Safety Record
10. Vanpool Policies & Procedures
11. Van Maintenance & Use of Back-up Vans
12. Transition Program
13. Interface with Other Ridesharing Programs
14. Project Administrative Costs by Type
15. Operational & Financial Characteristics of Vanpools

Before discussing in detail each element of the project, it is necessary to characterize the development of the whole project from the time of final grant approval through the fall of 1977 when full staff operations began.

At about the time that final approval was made by UMTA, a change in project administrators was implemented by the District. The responsibilities for UMTA grant applications, and for the vanpool project were removed from the Planning Department and were placed with a newly created Special Projects Administrator who would direct the efforts of both the Club Bus Program Coordinator and the Vanpool Developer. During the next six months, from March through August, only the Administrator worked on the project to complete details on 1) van purchase and delivery, 2) insurance coverage, 3) basic pricing guidelines, and 4) staffing. All four of these tasks presented problems at a time when the District Board of Directors was anxious to see the project implemented as quickly as possible after the lengthy 13(c) negotiation phase. Consequently, the project, from the very beginning, has been under a great deal of pressure to produce results. This has both stimulated and impeded progress at various points in the development of the project. One overall result has been a process by which accomplishment has preceded planning. This has often produced frustration and a sense of crisis on the part of the staff. In its early stages, the project was

plagued with a sense of "too little accomplishment"; however, it has subsequently emerged as a successful project in the eyes of the Board of Directors. The pressure resulted from two factors:

1. Unrealistic expectations made about the ease of marketing and forming vanpools, and
2. The arrival of all 35 vans at the same time as the full-time staff began work.*

With the staff hired and the vans sitting on the lot, the Board of Directors expected thirty vanpools to be in operation within a few months. The goal set for the first month was 10 vanpools. At the end of the first month, with what can only be characterized as an all-out effort on the part of project staff, three vanpools were formed. Note that the presence of the capital equipment, itself, determined the goals as opposed to any particular market research on demand or established information on the administrative lead time necessary for a successful marketing effort. Obviously, expectations had to be changed. Over the subsequent six months, pressures and expectations eased as the number of vanpools grew. And, in fact, the rate of vanpool formation by the Golden Gate project for its first nine months exceeded that of all other similar projects.**

Subsequently, this has caused the project to develop in different directions than originally intended and without sufficient planning for marketing and a transition or seeding program. The project now faces these tasks after having formed a first generation of vanpools.

*The reasons for this are discussed later.

**Information published on the Knoxville project in the fall of 1977 helped to provide some perspective on what could be considered reasonable progress.

The review of early developments illustrates that the impacts of public, area-wide vanpool promotion are little understood. There is no established set of criteria by which to judge progress; the market research on the subject is minimal, and the conclusions are uncertain. The UMTA/SMD demonstrations, of course, are intended to provide such information.

4.2.1 Project Staff Personnel & Consulting Services

The revised grant application is planned for four full-time employees as follows:

1. Assistant Project Manager -- administration and marketing
2. Administrative Assistant -- fleet administration and pool formation
3. Technical Assistant -- research market and data collection
4. Clerk/Typist -- project support services.

In addition, a project manager, senior planner and assistant planner were to spend 5 percent of their time providing general project management and support.

Initially, the project administrator negotiated a contract with a CALTRANS specialist in ridesharing promotion to be the assistant project manager and vanpool developer on an "on-loan" basis. However, a salary level could not be agreed upon that satisfied the District's board. This caused a serious delay in staff development. The project administrator eventually resorted to regular hiring procedures.

In the process of approving an actual staff plan, the District's Board of Directors did not want to fund more than three full-time staff positions -- even though there was full federal funding for the project. This was due to concern about creating positions that might not be funded later and assumptions made about the amount of work required to be done. Consequently, the project administrator was funded at half-time and three full-time positions were created for a vanpool developer, fleet administrator/pool coordinator and project assistant. These three full-time persons were hired to start work at the beginning of September. Subsequently, it was learned that three people could not fulfill all the roles that were required, especially since immediate operation of all facets of the project were to be accomplished simultaneously. The evaluation contractor concurred with the project administrator that this was the case and that the data collection activities as well as project development were being seriously impacted negatively. Two additional persons were hired in November -- on a part-time basis. By January, two new full-time positions were approved and filled by these two persons. Figure 4-1 provides an organizational diagram of the Special Projects Office as it is staffed at present. The following list provides a statement of the responsibilities for each vanpool project position.

1. Special Projects Administrator: reports ~~report~~ directly to the General Manager and has overall responsibility for the project; acts as liaison with the District's Board of Directors, UMTA, the evaluation contractor, and other agencies in the Bay Area; staffing decisions; budget control; implementation plans; some direct marketing with employers.
2. Vanpool Developer: supervises vanpool project staff; organizes internal office systems; contacts employers, government organizations, civic organizations, and other groups to publicize and develop

GOLDEN GATE DISTRICT'S
OFFICE OF SPECIAL PROJECTS

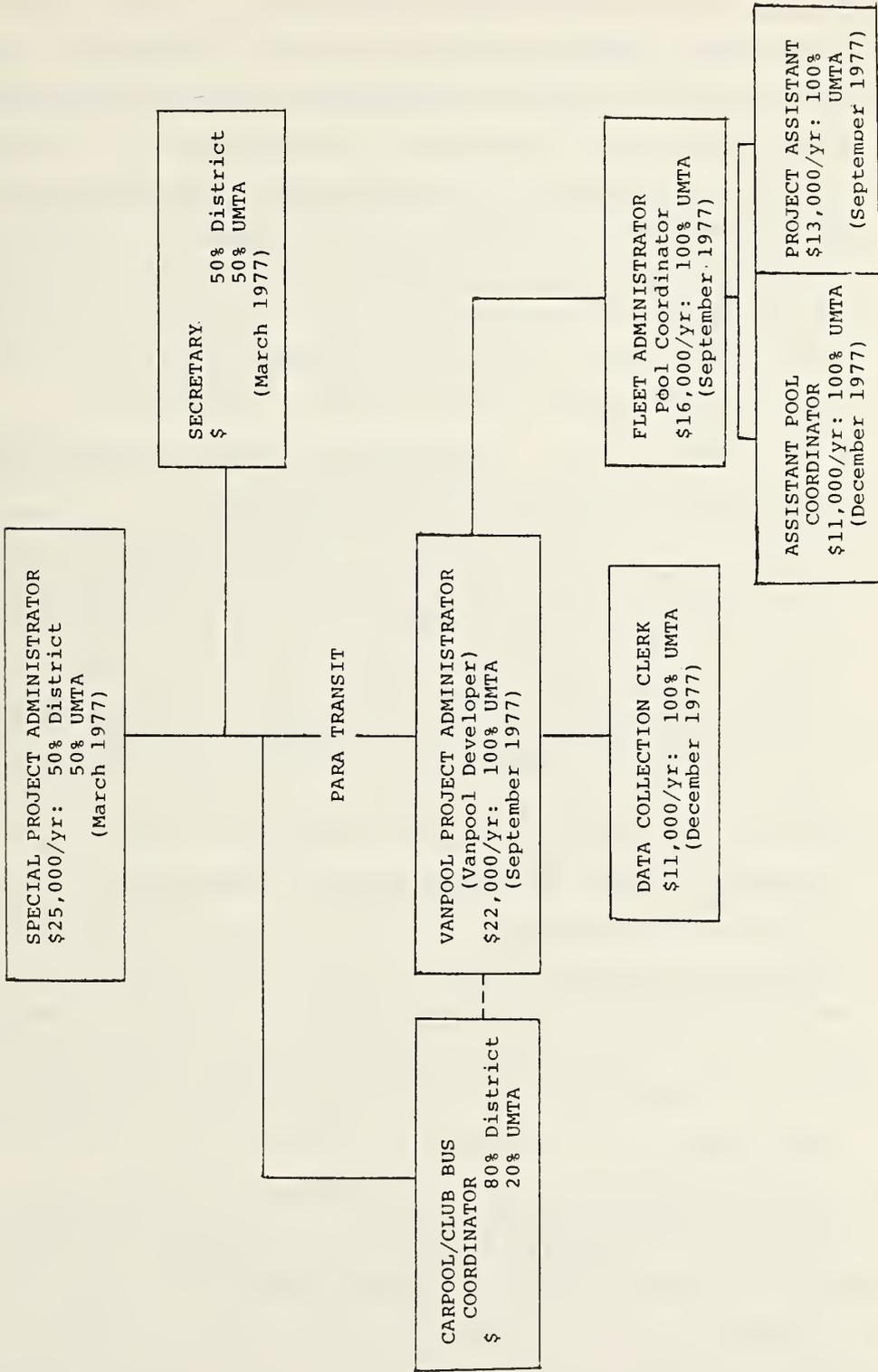


FIGURE 4-1. VANPOOL PROJECT STAFF ORGANIZATION (December 1977)

- interest in vanpooling; identifies, selects, and implements appropriate promotional campaigns; assists employers and vanpool groups in acquiring privately owned commuter vans; makes arrangements to obtain insurance coverage for the project's vanpools; together with the Special Projects Administrator, analyzes project data and formulates policies and procedures; provides advice and consultation to those wishing to start their own vanpools or vanpool projects; arranges for press releases and provides interviews to representatives of television, radio, and the press.
3. Fleet Administrator/Pool Coordinator: arranges for and monitors vehicle preparation and maintenance; supervises Assistant Pool Coordinator; answers questions of vanpoolers and potential vanpoolers, and assists drivers in locating other sources of vans, financing, and insurance; orients new drivers.
 4. Vanpool Project Assistant: installs promotional exhibits and conducts van demonstrations; keeps records and writes reports concerning operations and van status; drives vans to exhibits, maintenance facilities, and other locations.
 5. Assistant Pool Organizer: maintains files of applications of drivers and riders; matches groups of potential riders and drivers; answers vanpoolers' questions and deals with their complaints; places newspaper ads; completes statistical reports.
 6. Data Collection Clerk: performs clerical functions and maintains files; serves as receptionist and typist; gathers and tabulates data.

The staff has stabilized at this level and is able to fulfill all of the roles required. The project has applied for CETA funding for an Administrative Aide position, but the funding has not materialized.

UMTA approved a procedure by which the project could use a marketing firm that was already under contract to the District on a competitive bid basis. A \$20,000 vanpool project contract was negotiated with this firm for consulting and support services over the two year demonstration period.

4.2.2 Accounting and Record Keeping

Appendix D provides flow charts and codes for the accounting system used for the financial aspect of the vanpool program. Diagrams marked "Grants" are concerned with administrative costs and incomes relative to the project administration; diagrams marked "Operations" are concerned with costs and revenues relative to the vanpools, themselves, which are intended to be self-supporting.

All grant-side or administrative expenses are coded with two numbers: one code is for purposes of the UMTA grant line items -- the second series of codes is for purposes of project management and evaluation. These codes provide a breakdown of project administrative costs by type. All revenues for the grant-side of the project will come only from UMTA -- except for the accumulating van depreciation fund which may be used for grant-side expenses.

The accounting of expenses and revenues in connection with vanpool operations are broken down by type of cost item for each individual vanpool. Expense invoices from vendors and drivers are posted against revenues from riders for each vanpool. The "1800" series of codes are used for the different categories of costs, each of which will also have certain proportions of

the revenue assigned to it: insurance premiums, depreciation reserve, parking, gas, servicing (oil/lube), maintenance (tune-up), accident repair, insurance deductible, and tires.

The only revenue, the revenue from riders, to be posted in favor of vanpool operations on the 1800 series accounts would be insurance claims paid by the insurer and driver payments for personal miles.

Revenues credited to the depreciation account are treated as a source of promotional subsidy in cases where vanpools operate with vacancies (these monies could also be used to purchase additional project vans). Charges posted to the depreciation account are based on a pricing policy whereby vanpool fares are meant to cover depreciation, even though the grantee will not experience any direct non-project costs with respect to this item.

Monthly and project-to-date figures for each type of cost and revenue is supplied to the project administrator for each vanpool and all vanpools together.

4.2.3 Van Acquisition and Preparation

UMTA had approved a procedure by which the vehicles were acquired through the California State Procurement Service, which selected the bid offering the vehicles for the lowest purchase price. The vans were purchased from a dealer in Hayward, California, which is on the east side of the San Francisco Bay, about 30 miles from the vanpool project headquarters. The fact that the dealer was so far from the project and the vanpoolers caused some problem in obtaining maintenance services; this will be explained in more detail in Section 4.2.11.

Eighteen "Deluxe" vans with bench seats for eleven passengers were purchased for \$7,800 each. Seventeen "Luxury" vans with reclining seats for nine passengers were purchased for \$9,300 each. The deluxe vans officially seat eleven passengers with four in the last bench seat; ten persons is considered a more

comfortable limit. In hindsight, the staff realizes that the 15-passenger model (longer by 18") fitted with seats for 12 would have been preferable. The latter would have cost only an additional \$300. All the vans are Plymouth Voyagers with air conditioning, automatic transmission, AM radio, carpeting, power steering, and power brakes. The reclining, airline-style seats used on the luxury model vans were installed by a firm in Hayward, and the project purchased steps for the sides of the vans from the same firm. The steps were actually installed on the vans by the District's body shop, where the undercoating, striping, and lettering of the vans was also performed.

Striping and lettering on the vans use the District's logo and colors of green and orange. The Vanpool Project and phone number are printed on the vans. Figure 4-2 provides a picture of the vans.



FIGURE 4-2. PHOTOGRAPH OF PROJECT VAN - "DELUXE"

It was originally planned to take delivery of the vans on a phased basis over a six-month period beginning in June, 1977. A strike at the Chrysler assembly plant made it impossible to receive the vans until the end of the summer, and as a result, the project took delivery during a 4-week period starting in mid-August.

4.2.4 Insurance, Legal, and Labor Developments

4.2.4.1 Insurance - At present the project's insurance is with SAFECO Insurance Companies. Coverage for each vanpool is:

- \$1,000,000 Combined Single Liability
- \$2,000 Medical Coverage
- \$15/30,000 Uninsured Motorist
- \$50 Deductible Comprehensive
- \$250 Deductible Collision

The Bridge District has an additional contingent liability coverage of \$1,000,000 for each vanpool. This additional coverage contributes approximately \$500 of the annual premium for each vanpool.

The premium charged for a van is based on three factors. The first factor is the type of van use. A "pool rate" is charged for days the van is being used by a vanpool; a lower "staff rate" is charged for days when the van is used by the project staff; a "lotrate" is assessed when the van is not in current use. The project staff keeps complete daily records indicating which vans are in pool use, used by the staff, or remaining idle.

A second factor used to determine the premiums for a van is the value of the van. The deluxe vans, with a purchase price of \$7,800 and seating for twelve, have lower premiums than the \$9,300 luxury vans with seating for ten. This is in contrast to any assumption that one might make that the vans with more seating would have the higher rate for liability reasons.

A third factor in determining premiums is the county of origin and destination for each vanpool. The annual premium for a van in use by a vanpool group based in Marin, Sonoma, or Napa Counties ranges from about \$1200 to about \$1400. (Note that without additional coverage due to District liability (@ \$500), the premiums would approximate ISO rates of \$700-900.*) Presently there are no vans based in San Francisco or Alameda Counties; however, any such van would be charged premiums of about \$2400 and \$3000 per year respectively. It is believed that such high rates would render vanpooling from San Francisco and Alameda Counties prohibitively expensive. The project has not charged the one van based in Alameda enough to cover the insurance premium because the vanpool was expected to disband in June, shortly after the quote was made. No long-term solution has yet been found relative to charging insurance rates in such cases.

The insurance policy requires that drivers must be 25 years of age or older and possess a California driving license. They must have had no more than one moving violation in the past three years, and no moving violations at all in the last twelve months. Finally, the drivers are required to take the driver training course described in a later section.

Obtaining an acceptable insurance policy was a long and difficult process. The earliest inquiries concerning insurance were made by District personnel prior to July 1977. One approach that was being considered at that time was that individual drivers might be allowed the option of purchasing insurance on their own, but this possibility was rejected in September 1977, since it would be difficult if not impossible for individuals to get insurance for a vanpool. In fact, when the broker who handled the rest of the Bridge District's insurance attempted to find an underwriter for the policy, he was turned down by every company except SAFECO.

* Insurance Services Offices (ISO).

After extensive negotiations, a July 1, 1977 letter from the broker confirmed the fact that SAFECO would underwrite the policy, and quoted the coverages and premiums involved. In September, the vanpool project proposed that different premiums be charged for lot, staff, and pool use. This was deemed an acceptable arrangement by the broker, and this three-level coverage became effective on October 26.

The actual policy was received by the vanpool project in December 1977. The arrangement used to certify that the vans were insured prior to that time was a certificate issued by the broker for each van at the time the van began operating as a vanpool. The project staff notified the broker by telephone of each new driver and whether he or she fulfilled the insurance requirements. The insurance company upon receipt of a written statement to this effect would issue the certificate; however, the phone call itself would bind the insurance company.

The insurance policy covers all the vans either when on the lot or used by the staff. When the policy was received in December 1977, the project's attorney found it contained a number of unacceptable terms as well as some ambiguities and some critical typographical errors. In a March 1978 meeting representatives of SAFECO agreed to alter the policy in conformance with the attorney's suggestions.

The insurance company predicts that the rates will be cheaper next year, since this year's premiums included the "set-up" costs involved with offering a new type of insurance. The project has made contacts with various other insurance companies

which have expressed an interest in insuring vanpools. GEICO,* for example has indicated that it would offer a 10 percent discount for drivers who have taken the driver training course, with an additional 10 percent reduction after a year of safe vanpool operation.

4.2.4.2 Legal Considerations - The project has obtained the advise of the Bridge District's law firm on several occasions in addition to the insurance issue mentioned above. Both the Cooperative Agreement with drivers and the Policies and Procedures agreement to be signed by riders were prepared with the cooperation of the attorney.

A legal opinion was also needed concerning the liability of firms whose employees were involved with vanpools. One large San Francisco employer whose employees make up four vanpools requested that the project provide them with a "hold harmless clause," but the attorney said the project could not provide such a clause. The Knoxville and Los Angeles vanpool projects were contacted, and they indicated that they had told employers that the projects could not protect the employers from liability.

Legal advice was also sought concerning government regulations dealing with privately owned vanpools, safety devices required in privately sponsored vanpools, the effect of incorporation of a vanpool's owners on their liability for personal injury and property damage, and the effect of profit-making on the above issues. It was determined that the vanpools would not be subject to any special regulations or safety requirements unless they were operated for profit. The definition of "profit," however, was not entirely clear in the relevant laws.

* Government Employees Insurance Company (GEICO).

It was also found that incorporation was not a guarantee of immunity from liability.

Legal opinions were required concerning the use of tax-exempt vehicles (the vans) for private purposes and the pumping of the District's tax-exempt gas into vehicles which might use the gas for private purposes. It was determined that the vans could be used for private purposes, but that tax-exempt gas should not be pumped into the vans.

4.2.4.3 Labor - To date, there has been no formal objection from organized labor concerning the project operations. However, the project staff believes that marketing efforts, such as the distribution of a vanpool brochure on commuter bus runs from Sonoma County to San Francisco, are constrained by labor concerns.

4.2.5 Pricing

The method used to determine fares is as follows: The daily roundtrip mileage, rounded to the nearest five miles, is multiplied by 21 to get the monthly mileage. An extra 21 miles are added for service, etc. This total is multiplied by 11¢ per mile, which covers operating costs as follows:

\$.07	Fuel
.015	Lube/oil.
.01	Tires
<u>.015</u>	Tune-up/Maintenance
\$.11	

Depreciation, insurance, and parking costs are added to this figure to get the total monthly cost. Additionally, each van-pooler is charged \$.25 per month to cover the deductibility exposure for collision and comprehensive coverage. The total is divided by the number of paying passengers (usually ten for

deluxe vans and nine for luxury models) to get the monthly fare per passenger, which is rounded to the nearest dollar.

Depreciation is computed on a six-year straight-line basis or 120,000 miles, whichever accumulates more rapidly. To date, there is no vacancy rate built into the fare structure, and there is no charge for back-up vans. The project's policy on vacancies is discussed in section 4.2.10 on Vanpool Policies and Procedures.

The pricing and particularly the depreciation scheme, was designed to produce fares that would be comparable to leases that could be obtained on the private market. This would provide vanpoolers the best situation in which to seed to their own vans. At the same time, the project administrator was sensitive to the issue of vanpool and bus fares being competitive. A comparison of fares by mode is provided in Chapter 5.

Two aspects of the project vanpool pricing that are different from private market pricing tended to cancel each other. While the project vans experience no finance charge, the full insurance cost to the District is charged to the vanpools -- including the \$500 attributable to coverage of District liability. Consequently, on the private market, vanpool fares would reflect higher finance charges and lower insurance costs.

The California Department of Transportation (CALTRANS) owns a number of parking lots in San Francisco which it leases to private operators. The vanpool project staff contacted CALTRANS by letter to inquire about obtaining subsidized parking in these lots, and CALTRANS offered to subsidize \$30 of the \$40 monthly fee per van. The procedure for obtaining the subsidy is very simple. The vanpool project calls the operator of a parking lot to determine whether a space is available, and if one is, the vanpool project sends a \$10 check each month to the operator and sends a letter notifying CALTRANS of the arrangements. CALTRANS then credits the lot operator's account with \$30 each month for each van.

Currently, thirteen vans are parking in these subsidized spaces. Some vanpools obtain free or inexpensive parking from their employers, and others are too far from the subsidized lots to use them. Most of the subsidized lots are located in downtown San Francisco, in and around the Financial District.

Table 4-3 provides examples of fare calculations for 50 mile and 100 mile round-trip commute distances -- using Marin and Sonoma County insurance rates respectively. Deluxe and luxury vans are compared, as well as fares depending on the number of paying passengers. Luxury vans, which potentially seat fewer paying passengers, add approximately \$30 per month for the whole vanpool group in the Marin example; the addition for luxury vans in the Sonoma example is approximately \$40. The proportionate share of the total is also noted for each type of cost. Operating costs range from one-third to one-half of the total for the four examples cited.

4.2.6 Marketing Approaches

The project staff is primarily responsible for the marketing effort with assistance on materials from the marketing firm of Arnold, Palmer, and Noble. The implementation plan contained in the grant application anticipated that market research and promotion would be planned and executed before the arrival of vans. It also emphasized employer promotion rather than general residential promotion to commuters in the corridor. This plan did not materialize primarily due to pressures to start vanpools concurrent with the arrival of the vans and the staff in September 1977. During that month, the decision was made to emphasize a "corridor" approach to marketing and to defer employer contacts and development of promotion through employers. It was thought that employer contacts, by and large, would take long lead times to develop. In addition, project systems (e.g.,

TABLE 4-3. GOLDEN GATE VANPOOL PRICING - MONTHLY FARES

COSTS	Marin to San Francisco		Sonoma to San Francisco	
	Deluxe Vans (\$7,800)	Luxury Vans (\$9,300)	Deluxe Vans (\$7,800)	Luxury Vans (\$9,300)
Depreciation	\$108	32%	\$137	28%
Insurance	99	29%	104	21%
Parking*	10	4% }	10	3% }
Deductible	3		3	
Subtotal-Fixed Costs	220	65%	254	52%
Operating @ \$.11/mile	118	35%	233	48%
	\$338	100%	\$487	100%
<hr/>				
FARES				
8 Paying Passengers	\$42		\$61	\$66
9 Paying Passengers	38		54	58
10 Paying Passengers	34		49	-
11 Paying Passengers	31		44	-

• 50 mile round trip = 1071 miles/month
 • Depreciation based on S/L six years

• 100 mile round trip = 2122 miles/month
 • Depreciation based on 120,000 miles

(* Parking costs vary; \$10 is used as an average.)

an application form, matching, vanpool policies, maintenance contracts) were not developed as a complete package to present to an employer for his cooperation and assistance. The risk of alienating potential employers and losing their support by not being able "to answer all their questions" was seen as too great.

Given the need to promote vanpools and create systems at the same time, the staff used a combination of toll booth handouts, signs at the toll booth, general newspaper and radio advertising, community meetings and downtown street demonstrations to solicit initial applications during the fall of 1977. In addition, four effective employer promotions developed spontaneously, primarily due to interest generated on the part of management and employees. The project staff worked with these employment centers on an ad hoc basis.

The staff also hoped that operating vanpools and vans on the road would provide visible promotion of the program and stimulate media coverage of the project as a newsworthy subject. Signs were provided for the vanpools indicating the origin and destination points so that the vans would provide a more graphic illustration of the service occurring. Other add-on signs were used to advertise vacancies.

Each specific type of promotional campaign is explained in more detail below:

1. Toll Booth Brochures - In June 1977, January 1978, and June 1978, brochures were handed out at the Bridge toll booths by District personnel. Each campaign lasted three days and distributed approximately 25,000 brochures. This method was a very cost-effective way of contacting a large number of people. Each campaign required about 60 person-hours of effort at the toll booths.

2. Take-One Holders - Brochure holders have been placed in over 20 locations, including libraries, city halls and government buildings, AAA offices, the San Francisco Chamber of Commerce, and the offices of a number of large employers.
3. Community Meetings - Five community meetings were held with pre-meeting promotion on radio and in newspapers. The meetings were held in Petaluma, Napa, San Rafael, Sonoma, and Sebastapol, and attendance in most cases was less than a dozen. The meetings were costly and poorly attended, and it was decided to discontinue this campaign.
4. General Newspaper Advertisements - \$7300 has been spent to date on background newspaper advertising.
5. Spot Newspaper Advertisements - Advertisements for specific vanpool vacancies have been placed in local community newspapers. Six ads have been placed, with each running either one or two days. The total cost of these ads was \$145.40. Three of the ads generated no responses. The other three resulted in one, two and six responses, respectively. (through March 1978)
6. Free Rides - One week of free rides was provided by a volunteer from the Technical Advisory Committee. A satisfactory number of riders took advantage of the offer, and several of the riders joined vanpools. The program was advertised in community newspapers.
7. Downtown Street Demonstrations - Plaza demonstrations have been conducted in downtown San Francisco eleven times, with an average of 80 brochures being handed out to interested commuters each time. The demonstrations involved a project staff member who parked a van downtown, handed out brochures, and answered questions. Each demonstration cost approximately five hours of staff time plus use of the van and promotional materials.
8. Corridor Shopping Center Demonstrations - Demonstrations have been conducted in two residential shopping centers, each involving a van and a staff member. The average number of brochures distributed was 75. The employee spent 7.5 hours on each program.
9. Fairs - A booth was placed in the Marin County Fair. It was not very effective, and the cost of renting the booth was \$100. The project cooperated with RIDES, Inc. in a booth presentation at the Earth Day Fair in San Francisco.

10. Toll Booth Signs - A sign promoting ridesharing was temporarily placed at the toll booths on the Bridge. The sign promoted club buses, carpooling, and vanpooling -- and provided the project's telephone number.
11. Kiosk Display - Each Kiosk consists of three panels about seven feet high by four feet wide displaying pictures and offering brochures. Kiosks have been displayed at the Marin Civic Center and two offices of the Fireman's Fund Insurance Company. The project purchased three kiosks for \$5,400; since then, the kiosks have been a continual problem to both place and move; it has been determined that the only efficient use for it is in conjunction with employer promotion and that the project should consider retaining only one and selling the other two. (The individual displays on the kiosks are removable, and the basic framework and panels could be used by another organization.)
12. Commute Bus Brochure Handout - Over 2000 brochures were distributed on Sonoma County buses on January 27, 1978. This may be repeated on other bus lines in the future. Bus personnel placed the brochures on the seats before starting in the morning.
13. Welcome Wagon - Brochures are being passed out to about 300 homes per month by the Welcome Wagon starting in May 1978. Personnel from that organization have been informed about particulars of the project so that they can answer questions about it.
14. Media News Coverage - Television news interviews with vanpoolers and newspaper human interest stories concerning the program have been very effective. Three TV interviews were conducted and over 27 articles have appeared in local papers.
15. Vans on the Road - Each van displays a sign stating its origin and destination, and when vacancies occur, small "Riders Wanted" signs have been displayed, with good results. The project has deliberately subsidized initial vanpool groups with vacancies with the two-fold objective of keeping active applicants interested and advertising the project with visible vanpool services on the road. Thru March 1975, the project has spent approximately \$6,000 of the depreciation reserve fund in this manner. Section 4.2.10 (Vanpool Policies and Procedures) discusses this policy in more detail.

16. Governmental Presentations - These presentations have served both as public relations and promotion; in particular, the Marin County Board of Supervisors has been helpful in supporting promotional activities at the Marin Civic Center.
17. Employer Promotion - To date, about a dozen large employers have been contacted by project personnel seeking four levels of support: 1) help in meeting employees; 2) promotion with employees; 3) preferential parking (free parking or parking spaces close to the building); and 4) cost sharing. Several of the employers provided one or more of the first three types of assistance, but none have offered to share costs of vanpools. About a dozen vanpools have formed as a result of these efforts. The staff is presently planning a large scale, ongoing promotional campaign to San Francisco employers in coordination with the San Francisco Chamber of Commerce and RIDES, Inc.

The brochures used so far are included in Appendix Q.

4.2.7 Evaluation of Marketing Approaches

An attempt has been made by the project staff and the evaluation contractor to measure the cost and effectiveness of individual promotional campaigns. The methodology involves the following data collection activities:

1. Accounting for marketing expenses on the part of the District, i.e., coding of invoices and staff time sheets (Appendix P);
2. Staff recording of effort spent on each promotional campaign (Appendix P);
3. Evaluation contractor interviews with staff and consultants on efforts for each campaign, an accounting of materials used;
4. Vanpooler surveys in which individuals are asked about exposure to and impact of informational sources on the vanpool program (This activity has not yet occurred.)

Effectiveness can be evaluated in terms of both applications generated and eventual vanpooler participation. The former measures immediate impact of a campaign to solicit interest. The latter measure is influenced by the quality of the application, i.e., the quality of the interest of the applicant and the focus impact of the marketing. The source of the application may determine the ease of matching it with other applications. An example of this would be employer promotions where destinations are concentrated vs. general newspaper advertising.

The Golden Gate project staff has set out to test many different marketing approaches as part of their demonstration. This provides an opportunity to evaluate many approaches. At the same time, it is more difficult to isolate the impact of any one approach. For example, general newspaper ads may provide "background" impact while an employer promotion or a brochure at the tollbooth may be credited as the method of contact. This is the potential hazard in attempting such an analysis. At the same time, however, vanpooler surveys will help to isolate the impacts. It is desirable to have an explicit cost associated with each type of marketing approach used to distribute applications which are the essential element of communication for ridesharing. It is reasonable, then, to compare the cost and flow of applications through each of these methods.

To date, the project has successfully isolated costs for each promotional campaign through March 1978 (the first seven months of staff operations), and for each type of marketing expense. Some problems have been encountered in the accurate and complete coding of application forms. To begin with, the system of codes and adherence to the methodology did not start until November, causing the first few hundred applications to be uncoded or coded

after-the-fact. Therefore, a certain amount of uncertainty existed in the data. Through reconstruction of events during that time, it has been possible to adequately estimate the number of application returns from each source. As the project progresses and a greater number of applications are coded correctly, the quality of the analysis should improve.

A current problem is that the application file has not been adequately updated through the emerging computer data processing system to reflect changes of status from applicant to vanpooler. Thus, at present adequate data is not available on the contact codes for vanpoolers as a subgroup. This problem should be solved in time for the data to be included in the finalization of this report when vanpooler perceptions of sources of information on the project are presented.

4.2.7.1 Breakdown of Marketing Costs by Type and by Campaign

1. General Approach to Determining Marketing Costs

This section breaks down the evaluation contractor's calculations of marketing costs into three types: 1) operating costs, 2) unused consumable materials, and 3) capital costs. The total of these costs will be compared with the amount of funds charged to marketing in the 1800 series accounting system, and the validity of the cost estimates will be discussed in the light of this comparison. A description of the three cost types used by the evaluation contractor follows:

- a. Operating Costs - This type includes the costs of planning, developing, and implementing particular marketing campaigns, except for the costs of unused consumable materials and investment of time and

expenses in "marketing capital." Consumable materials are included on a per unit cost basis.

Specific items include:

- 1) Staff time (direct salary plus fringe benefits)
- 2) Vehicle use @ \$.17 per mile
- 3) Consultant fees
- 4) Rental of advertising space and time in newspapers and radio
- 5) Brochures used
- 6) "Take-one" holders used
- 7) Space rental at County Fair
- 8) Part-time help.

- b. Unused Consumable Materials - This category consists of supplies and equipment which can be used only one time, such as brochures and "Take-one" holders. The costs of these items include all staff time, consulting fees, printing costs, etc., involved in the design and production of the items. The total cost of a given item is divided by the number of units produced to find the unit cost, as shown in Appendix P, and this figure is used to compute the value of the unused inventory of these items. As consumable materials are used, their costs are included in operating costs for each campaign as indicated above.
- c. Capital Costs - This type of cost is comprised of equipment which is able to be used on more than a single occasion, such as materials and devices used in presentations and demonstrations. Staff and consultant time spent in developing these resources are also included. See Appendix P. The vans are not included in this category; their cost is computed at \$.17 per mile and included under operating costs.

2. Marketing Costs by Type

Appendix P provides the back-up data used to calculate the three types of marketing costs. Table 4-4 presents:

- a. Marketing Costs broken down by campaign,
- b. Unused Consumable Materials Costs by item, and
- c. Marketing Capital Cost by item.

Working from the staff reports on marketing efforts and calculating costs on the basis of individual promotion campaigns and type of cost, we arrive at a sum of approximately \$59,000 spent through March 1978. Some \$3,800 of these expenses represent inventory of unused consumable materials and \$20,100 is capital investment.

3. Comparison With Accounting Records

Certain accounting codes in the 1800 series are used to account for marketing costs. In addition to the obviously labeled categories (i.e., 1802, 1818, and 1821), there is the prorated share of the fleet handling costs (codes 1840-43) and the slide-show projector costs which were inadvertently put under code 1812. Only one significant set of expenses that occurred before the end of March but which were to be billed after March had to do with the kiosks. Table 4-5 presents the cost figures for marketing as accounted by Golden Gate.

4. Validity of Marketing Cost Estimates

The evaluation contractor's estimated total cost of the marketing program through March, \$58,921, is within 3 percent of the total amount charged to marketing in the project's accounting system. The difference is only

TABLE 4-4. MARKETING COSTS BY TYPE

a. Operating Costs by Campaign

1) Employer Contacts:	\$ 3561	* **
2) Governmental Relations:	470	**
3) Fairs:	508	
4) Take-one Holders--Public:	211	
5) Toll booth Handouts:	6085	
6) Bus Handout:	601	
7) Petaluma Free Ride:	608	
8) Community Meetings:	7000	**
9) Plaza Demos:	1455	
10) Shopping Center Demos:	300	
11) Newspaper Advertising:	8612	
12) Press Releases:	2724	
13) Other Uses of Brochures:	597	
14) General Arnold, Palmer, and Noble Consulting:	2318	***
<u>Sub Total</u>	\$35,050	

b. Unused Consumable Materials

1) Blue Bus Brochure:	\$ 1824
2) Green General Brochure:	1616
3) Take-one Holders:	356
<u>Sub Total</u>	\$ 3796

c. Capital Costs

1) Kiosks:	\$ 6922
2) Slide Show:	9359
3) Flip Chart Presentation:	1218
4) Projection Equipment:	639
5) Banners, Posters, Signboard and Showcards:	1967
<u>Sub Total</u>	\$20,105
GRAND TOTAL	<u>\$58,951</u>

*Includes cost of setting up kiosks at employers locations, but does not include cost of designing and producing kiosks.

**Does not include cost of designing and producing slide shows.

***Includes general consulting plus an investigation of television and billboard advertising.

TABLE 4-5. GOLDEN GATE MARKETING ACCOUNTS -
EXPENSES THROUGH MARCH 1978

1802 - Staff Services on Marketing	\$12,132
1812 - Materials*	639
1818 - Marketing Expenses	6,565
1821 - Consulting Services on Marketing	35,113
1840-43 - Staff Use of Vans for Marketing**	<u>324</u>
Subtotal Accounted as of March 1978	54,773
Addition for Kiosk Costs Not Billed***	<u>5,900</u>
Total Marketing Expenses thru March 1978	<u>\$60,673</u>

*The cost of the projection equipment was charged to 1812 - Materials and Equipment.

**The total charged to 1840-1843 was \$1,407 through March. To estimate the prorated share to charge to Marketing, the number of miles charged to Marketing was calculated (2017). At 10 mpg and \$.60 per gallon, this would have consumed \$121 worth of gas, which would have been 23% of the total fuel expenses. 23% of the total Fleet Handling expenses equals \$324, which is marketing's prorated share.

***As of March 31, only \$300 of the development cost of the kiosks had been billed. The remaining \$5900 was paid after March 31.

\$1,751. To analyze the significance of this discrepancy, several specific categories of costs are examined and analyzed in Appendix P.

Overall, the apparently understated staff costs and the possible inaccuracies in allocating the consulting fees detract from the precision of the cost estimates, but the impact on any individual campaign is probably no greater than a 10 percent underestimate or overestimate of costs of individual campaigns. This does not have a substantial effect on the evaluation of marketing campaigns. In summary, promotional costs have been assigned to each particular type of campaign with an accuracy of plus or minus 10 percent.

5. Allocation of Marketing Capital Costs to Campaign

The estimated operating costs of each campaign have been presented; however, a complete statement of the cost of a campaign must include a share of the cost of any capital equipment used in the campaign. To estimate this share, it is necessary to calculate a cost per unit of use and to multiply this by the number of units of use involved in a given campaign. A discussion of the factors considered in computing the cost per unit of use for each capital item will be found in Appendix O.

4.2.7.2 Cost-Effectiveness of Marketing Campaigns

1. Number of Applications and Vanpoolers vs. Marketing Costs by Campaign

A complete evaluation of the effectiveness of the marketing campaigns used requires a comparison of the costs of each campaign with some measure of the results of the campaign, together with a discussion of the factors influencing the success or failure of selected campaigns.

One variable which will be used as a measure of the effectiveness of the various campaigns is the number of applications from potential vanpoolers received as a result of the campaigns. The applications can be attributed to specific campaigns because applications distributed since November, 1977, have been coded by campaign. For example, the January 1978 toll booth handout was coded as "14".

Table 4-6 lists the total estimated cost, the number of applications received, and the cost per application for each campaign which has resulted in applications.

The analysis should begin by noting that many applicants may have been exposed to more than one marketing campaign before deciding to apply. Thus an individual submitting an application bearing an "employer contact" code may have also been influenced by newspaper ads, toll booth handouts, or other campaigns. It is not possible with the data available to give exact credit for such an individual to each campaign affecting his or her decision to apply. However, those applicants who have become vanpoolers were interviewed concerning their perceptions of marketing approaches; these results are reported in the next section.

It is also impossible, with existing data, to determine which campaign should be given credit for the various individuals who submitted applications they received from the project after calling in or writing to express their interest. A total of 169 people applied after making such telephone or written inquiries, and these individuals cannot be credited to specific marketing campaigns. The method used in this analysis does, however, provide some valuable insights into the effectiveness of the various campaigns.

TABLE 4-6. ESTIMATED COST, APPLICATIONS RECEIVED AND COST PER APPLICATION BY MARKETING CAMPAIGN, THROUGH MARCH, 1978.

<u>Campaign</u>	<u>Cost</u>	<u>Applications</u>	<u>Cost-Per-Application</u>
Employer Contacts	\$3898	231	\$ 17
Fairs	508		
Take-one Holders (Public)	211	1	211
Toll Booth Handouts	6085	560	11
Bus Handout	601	46	13
Petaluma Free Ride	608	2	304
Community Meetings	7095	10	710
Plaza Demonstrations	1455	84	17
Shopping Center Demos	300	3	100
Newspaper Advertising	8612	44	215
Government Relations	546	*	-
Press Releases	2724	*	-
Unaccounted Brochures	597	*	-
General APN Consulting	<u>2318</u>	<u>*</u>	-
	\$35,558	981	\$ 36

*No contact code applies.

It is important to make a distinction between those campaigns from which all applications have already been received and those for which applications are expected. Two campaigns fall into the latter group: employer contacts and take-one holders (public). Through March only one application was received from a public take-one holder, but the holders have only been on display since January, 1978. The time and money spent on employer contacts should also continue to provide returns. In the cases of several employers, only the initial meetings with management have been held, and follow-up in the form of meetings or other direct contact with employees will be necessary before these contacts can be brought to fruition. However, the four employer promotions in which the full cycle of presentations and applications has occurred are analyzed as a separate group.

The Cost per Application column in Table 4-6 reveals that the most efficient campaigns for application return so far have been the toll booth handouts (\$11 per application), the bus handout (\$13), the plaza demonstrations (\$17), and employer contacts (\$17). These campaigns will be examined one at a time.

It is not surprising that the toll booth handouts should be so efficient a means of generating applications. One-fourth of the target population of commuters (i.e., Market #1) pass through the toll booths of the Golden Gate Bridge each working day, and this concentration of the target group made it easy and inexpensive to contact them. Many other cities attempting to start a vanpooling program will not have the advantage of target populations travelling through toll booths. It is

interesting to note that the first toll booth handout occurring in June 1977, was more effective than the second, which occurred in January 1978. The June handout distributed 25,000 brochures and resulted in 341 applications; the January handout passed out 20,100 brochures and generated 219 applications. The number of applications per 1000 brochures in June was 13.6, while in January it was only 10.9.

The second most efficient campaign was the bus handout. In this campaign, brochures were distributed to passengers aboard Sonoma County buses, and once again the high concentration of members of the target population in easily accessible locations resulted in a low cost per application.

The plaza demonstrations were also very efficient, in spite of the fact that a minority of the workers in downtown San Francisco who were able to observe the demonstrations were actually residents of the target areas. The locations chosen for these displays were all close to large office buildings, and the demonstrations took place during lunch time, guaranteeing large audiences.

The employer contact campaign, with a cost per application of \$17, was more expensive than the most efficient campaigns, but it is very important to remember that this is one of the campaigns from which additional applications are expected in the future. Some of the employer contacts made through March 31 have consisted of initial meetings with management, and contact with the employees themselves has not taken place yet. Several meetings have occurred between members of the project staff and the San Francisco Chamber of Commerce, and the Chamber has offered to assist the project in obtaining the attention and

cooperation of San Francisco employers, but the Staff has not yet been able to take advantage of this offer. Thus, quite a bit of time has been spent on employer contacts which will not begin to produce applications until the initial efforts can be followed up. Thus, the \$17 per application figure for this campaign is encouraging at this stage of the marketing.

To give an idea of the effectiveness of employer contacts which have been completely followed up, such contacts will be described. The following table presents some data concerning the four employer contacts.

TABLE 4-7. MARKETING EVALUATION DATA ON FOUR COMPLETED EMPLOYER PROMOTIONS

	<u>Employees</u>	<u>Applica- tions</u>	<u>Van Poolers</u>	<u>Total</u>	<u>Marketing Per Appl.</u>	<u>Costs Per V.P.</u>
Sonoma State College	800	36	28	\$ 330	\$9	\$12
Fireman's Fund (San Rafael)	1400	45	21	196	4	9
Fireman's Fund (San Francisco)	1465*	25	21	270	11	13
Marin County Civic Center	1700	54	20	336	6	17
	<u>5365</u>	<u>160</u>	<u>90</u>	<u>\$1132</u>	<u>\$7</u>	<u>\$13</u>

(* Most of these employees live in areas not served by the project.)

1. The contact with Sonoma State College was initiated by an employee hired by the college to coordinate carpooling efforts for students and faculty. She heard of the vanpool project and called the staff. Members of the staff spent several hours advising her, and they provided

her with posters, brochures, and a van to display on campus for three days. She distributed the brochures to faculty and staff at the college; she collected applications from interested individuals and arranged two meetings between a member of the vanpool project staff and interested employees of the college. In this case, the efforts of the college's carpool coordinator were very helpful in organizing potential vanpoolers. The cost per application demonstrates the effectiveness of an employer contact which is completely followed up. Further illustrations of this effectiveness can be found in the other contacts included in the table.

2. The contacts with Fireman's Fund in San Francisco had some similarities with the Sonoma State College campaign. The initial contact was initiated by an employee of the firm who was responsible for carpooling. This individual did a survey to determine the degree of interest in vanpooling. He also displayed a van for three days and organized a meeting between a vanpool project representative and interested employees. This individual also had some responsibility for the San Rafael office of Fireman's Fund, and he reviewed a list of employees of that office to locate potential drivers. He invited these people to a meeting with a vanpool project representative, and together with those who were interested in driving, he found people to be riders in vanpools. Thus, at both Fireman's Fund facilities, as well as at Sonoma State College, a company employee facilitated the formation of vanpools, and once again this employee initiated the contact with the vanpool staff.
3. Another successful contact occurred at the Marin County Civic Center. In this case, the project contacted an official of the Civic Center to seek cooperation in publicizing vanpooling, but no results were obtained until a Project representative made a presentation before the Marin County Supervisors. One of the supervisors suggested that the project contact a specific official. This individual was contacted, and he arranged for brochures to be distributed to all employees at the Civic Center with their paychecks. This approach resulted in a large number of applications.

The employer contacts described above demonstrate the kinds of results available through this campaign when the contacts are followed up. In completing one of these contacts, it is essential that the employees be contacted directly either through brochures or meetings, and it is helpful if a representative of the employer assists in publicizing vanpooling and arranging meetings between employees and vanpool staff members. It is believed that when all employer contacts have been followed up completely, the cost per application generated through this campaign will be significantly less than the \$17 listed in Table 4-6.

Several of the campaigns proved to be very inefficient in generating applications. The two shopping center demonstrations cost a total of only \$300, but they resulted in only 3 applications. Newspaper advertisements costing \$8612 resulted in only 44 applications, for a cost per application of \$215; 128 people mailed coupons which they cut out of the newspaper ads, but when they were sent applications, only 44 of them actually applied. If the number of coupons submitted (128) is used instead of the 44 applications as a measure of the effectiveness of the newspaper ads, the cost per coupon is still \$67, which is much higher than the cost per application for the most efficient campaigns. The inefficiency of newspaper advertising can be attributed in part to the high cost of newspaper space.

TABLE 4-8.

VANPOOLER PERCEPTIONS OF SOURCES OF INFORMATION

	<u>Received</u>	<u>Thought</u>		<u>Ratio</u>
	<u>Information</u>	<u>Most</u>	<u>Influential</u>	
	<u>%</u>	<u>n</u>	<u>%</u>	
Friend or Relative	58%	93	36%	.62
Golden Gate Van	48	23	9	.19
Newspaper Article	44	27	10	.23
Employer Promotion	31	50	19	.61
Toll Booth Brochure	30	26	10	.33
Newspaper Advertisement	28	10	4	.14
Television Show or News	18		-	-
Other	11	21	9	.82
Residential Promotion	11	7	3	.27
Radio Talk Show	6		-	-
Radio Advertisement	6		-	-
Television Advertisement	5		-	-
		<hr/>	<hr/>	
		257	100%	

The Petaluma Free Ride campaign was also fairly inefficient, resulting in only 2 applications while costing \$608. It should be noted that this cost did not include the cost of the driver's time, which was donated.

Finally, the community meetings were extremely expensive, largely due to the cost of advertising on radio and in newspapers, and they only generated about 10 applications, for a cost per application of \$710.

A more extensive analysis of the contact codes for vanpoolers alone will be possible when the applicant computer data file is established and operating.

2. Vanpooler Perceptions of Sources of Information

Table 4-8 presents the data on questions 29a and 29b from the Initial Vanpooler Survey at the Time of Joining a Vanpool (See Appendix S). Sources of information are ranked by the proportion of vanpoolers who heard or read about the project in each way. The proportion of vanpoolers who thought of each source as the most influential is also presented along with the ratio of the two figures. The latter figure indicates what proportion of those who received information through a certain source also thought of it as the most influential. It should be kept in mind that these figures are for vanpoolers only and do not include all applicants.

In this case, marketing costs are not available to associate with every category, e.g., "friend or relative." But, for those categories where costs are available, the data provide further insight into the relative effectiveness of each type of promotion.* A good comparison is possible for employer promotion and toll booth brochures. Thus, while each type of promotion reached the same proportion of all vanpoolers (one-third of the total), only ten percent of all vanpoolers rated the toll booth brochures the most influential source in comparison to almost twice as many vanpoolers who rated employer promotion as the most important source.

One obvious explanation for this relationship is that employer promotions provide a more focused contact which leads to a greater rate of matching for commuters contacted in that way. Again, when complete data is available on contact codes for vanpoolers (vs. all applicants), it will be possible to report the number of vanpoolers who responded with an application form through each channel. It will also be possible to cross-tabulate that data with the vanpooler perceptions as a further check. In the meantime, relying on the survey data as reported in Table 4-8 and expanding it to the universe of 300 commuters who have tried vanpooling, comparisons of the various campaigns can be made. Thus, some 60 vanpoolers (19% x 300) would be credited to employer contacts vs. 30 vanpoolers.

*And will be related to an analysis of cost per vanpooler by contact codes when the data is available.

(10% x 300) in the case of toll booth handouts.* Using the cost data in Table 4-6, we would arrive at comparative cost figures of \$65 per vanpooler for employer promotions and \$200 per vanpooler for toll booth handouts. This analysis, then, differentiates between the campaigns on the basis of vanpooler outcome vs. application outcome.

The use of the survey data in conjunction with the contact codes and cost data is limited by the number and configuration of possible sources of information that were conceived of at the time of designing the survey form. In addition, there is the large unknown of what influences lie behind "friends or relatives" who account for one-third of vanpoolers' most influential source of information. It is possible that the survey should be revised and updated for the second generation of vanpoolers. However, one additional analysis of marketing cost-effectiveness is suggested by the data at hand. Approximately 10 percent of all vanpoolers report that seeing a Golden Gate van on the road was the most influential source of information. This translates into roughly 30 vanpoolers. As already indicated, \$6,000 has been spent in subsidizing vanpool vacancies thru May 1978. Aside from accomplishing the important objective of keeping active vanpoolers together, the subsidization program can be favorably evaluated with other marketing approaches for its "promotional" aspects alone. The resulting cost per vanpooler (\$200) is equal to that of the toll booth handouts and superior to several other marketing approaches. Thus, the subsidy program can be rationalized as a marketing tool in its own right.

* These figures are realistic on the basis of the fragmentary data that is presently available from the application file.

4.2.8 Applications, Office Procedures and Matching Processes

Appendix B contains the various application forms used. The basic application form used for all potential vanpoolers has undergone some slight modification over time: a set of boxes for the "cross street" at the residential address has been added; and the number of counties of residence have been increased for the joint Golden Gate - RIDES, Inc. application form. A supplementary application form is filled out by those interested in being drivers or back-up drivers.

The basic form is designed for automatic coding and key-punching. Most of the items are self-explanatory. Some items are coded by the staff in those boxes reserved "for official use." The status code indicates the status of the person within the vanpool program (Appendix F). The staff reports on any changes in a person's status (Appendix N), are analyzed to assess the extent of changes made and staff responses to those changes.

The vacancy report (Appendix M), is used to keep track of and evaluate staff responses to vacancies. The staff summary report on vanpool formation and vacancies is contained in Appendix J. Appendix U presents maps indicating the location of geographical codes used for origins and destinations. The four forms of matching efforts are discussed below.

4.2.8.1 Manual Matching - The applications are filed by origin, with an origin consisting of a city or a group of cities, and within each origin folder the applications are grouped by destination. Destinations within San Francisco are broken into map quadrants, each of which is identified by a pair of coordinates such as C-11 or F-9. The quadrants are each approximately .4 square miles.

Initial matching efforts were manual. Project staff members would scan the files until a group of applications with

common origin and destination was located. This group would then be examined to determine whether an adequate number of riders with compatible commuting times could be found. The minimum number of riders required to form a vanpool was originally eight for a luxury van and ten for a deluxe, but these figures were changed to seven and eight in November, and the minimum for both types of van was reduced to five in February. Once a large enough group was identified, a driver would be selected from the files, and the names of the potential vanpool members would be given to him or her to contact and organize.

Staff typically provided each driver with a list of potential riders; however, the size of the list varied depending upon the driver's needs. (Some drivers formed vanpools on their own without benefit of a list of names.) The effort to form a group was often complicated when applicants lost interest by the time they were contacted.

4.2.8.2 Computer Matching - In March 1978, the project obtained some donated computer assistance. The essential information from the applications on file was transferred to computer cards, and three computer printouts were generated: one with the applicants in alphabetical order; the second with them grouped by origin; and the third grouped by destination. The information given on each printout included the applicant's name, city of origin, destination (address and map coordinates when appropriate), starting and finishing time, driver status (i.e., rider, driver, or backup driver), and remarks (usually employer name).

The printouts made the matching process much simpler. The same basic steps were followed as with the manual process, but the actual identification of compatible groups was much quicker and easier since all relevant data could be seen at a glance on a

computer sheet. Using the printouts, the staff identified 19 potential vanpool groups. Nine of these were contacted, and three vanpools resulted. The other ten potential groups were not followed up because they lacked drivers, they were too spread out, or for other reasons.

Based on the experience with the donated matched lists, the project has contracted with a programming consultant for a monthly computer data processing of the applicant file.

4.2.8.3 Commuter Self-Matching - Many riders for new vanpools and many replacement riders for existing vanpools have been located by the efforts of other vanpoolers. A special code for such applicants indicates that at least seventeen vanpoolers have been referred by other active vanpoolers.

4.2.8.4 Employer Matching - As already indicated, several companies have provided important marketing and matching services by forming groups with their employees.

4.2.9 Percent of Applicant File Matched

A total of 1350 applications have been received through May 1978. Twenty five percent of the applicants (340) have vanpooled at some time; twenty one percent (287) are current vanpoolers. There was no formal process for determining how many applicants were called by individual drivers during the matching process.

4.2.10 Driver Selection, Training, and Safety Record

Individuals who indicate an interest in driving on their initial application are sent a supplementary application on past driving accidents and insurance. The individual's driving record is then obtained from the Department of Motor Vehicles. In order to qualify as a driver, the applicant must meet several requirements dictated by the project's insurance policy. He or she must be at least 25 years old and possess a valid California driving permit. The driver must have had one or less moving violation

during the past three years, and no moving violations during the last twelve months.

Applicants who meet the insurance requirements are kept on file. When a group of vanpool riders has been identified, the Assistant Pool Coordinator looks through the files for an appropriate driver. The primary selection criterion is geography (i.e., location of origin and destination). The second criterion is the date of application. A third consideration is proximity of the applicant's destination to one of the parking lots subsidized by the California Department of Transportation (CALTRANS). (CALTRANS pays \$30 per month for each vanpool parking in one of the designated lots in San Francisco, leaving \$10 per month to be paid by vanpoolers.)

When no driver can be located, an ad is placed in local newspapers. If this is not successful, the riders in the vanpool are called to see if they can locate a driver.

An additional insurance requirement is that all drivers must take the National Safety Council driver training course or an abridged version thereof. It is not necessary that the driver take this course before he or she begins driving, but the course must be taken within a reasonable time. The project offered a four-hour version of the course on April 1, 1978. Fifty-two trainees attended, and the total cost was \$310, including lunches, handouts, and xeroxing. The space in which the training was held was free. The course was taught by the Vanpool Developer, who had obtained certification by the National Safety Council. The course will be offered every other month, and each driver will be required to attend the course at either the first or second available opportunity. The course includes lectures, visual aids, and movies dealing with various kinds of accidents and ways to avoid them.

An additional procedure involves driver orientation. Each new driver receives this 45-minute explanation of policies, procedures, forms etc.

The project's safety record has been very good. The only accident to date involved a van which struck an illegally parked car, causing \$150 damage to the van and no damage to the car.

4.2.11 Vanpool Policies and Procedures

The project's official Policies and Procedures (Appendix C), and the Cooperative Agreement between the Bridge District and drivers (Appendix G), are scheduled for revision to change the the limit on personal use of the van from 350 to 500 miles per month, to allow the driver's spouse to drive the van, and to change other insurance-related legalities. The documents will also be made to reflect the new requirements regarding the number of riders in a new vanpool. At present, only five riders are needed to start a vanpool, rather than the larger numbers indicated in the Policies and Procedures. Both documents will have to be changed to show that the number of occupants required in a deluxe van after the start-up period is only 11, rather than 12, with the necessary increase in fares.

There is no set policy concerning the financial arrangements between drivers and their back-ups. Most back-up drivers pay the regular fare, although in some pools the driver and back-up driver split the fare. In some pools the driver pays the back-up driver's fare on days when the back-up must drive, while in others the back-up driver pays the full fare even when driving.

During the first two months of operation, seat reservations were required. These were \$25 deposits which had to be given to the District by each rider, on the condition that the deposit would be returned to the vanpooler after he or she left the program, provided that the vanpooler gave at least five days' notice to his or her pool before terminating. The first three vanpools in operation made these deposits, but they were returned in November after the project decided to discontinue this

requirement. The seat reservations were eliminated because they were seen as an impediment to joining a vanpool, and because keeping track of deposits and actually holding the funds increased the administrative workload.

Vanpool drivers are responsible for collecting the fares by the 28th of each month. The checks are made out to the Golden Gate Bridge District. Vanpools which cross the bridge drop them off at the District headquarters at the Bridge, while all other vanpools mail the checks to the Accounting Department at the Bridge headquarters.

Drivers are allowed to provide free rides to people interested in vanpooling. The free rides are limited to three days, although if the prospective vanpooler is still undecided after the three days, he or she may continue to ride while paying for the rides on a daily basis. Those who take advantage of these free rides are required to fill out a survey which the driver collects and sends to the project staff.

When a rider decides to drop out of a vanpool during the middle of a month, there is no reimbursement of fares. When a vacancy occurs, the project helps to find a new rider. The project will subsidize an empty seat for the first two months, after which the vanpool must absorb the cost. Originally the project required that a vanpool be nearly full before starting up, and any initial vacancies were not subsidized.

The project's policies concerning vacancies have evolved over time and are not yet set. There are three situations calling for specific attention: 1) vacancies at the start of a vanpool, 2) individual vacancies that occur after a vanpool has attained full ridership, and 3) a set of vacancies due to a split-off of a subgroup to form another vanpool.

In the first case, the project established a policy whereby vanpool groups could start without a full complement of members. Members ride at regular fares for up to two months while the vacancies exist. The objectives are to keep the interest of those already matched, to advertise the availability of the service with the van on the road and to motivate present vanpoolers to seek out other interested vanpoolers to form a full complement. These vanpool groups are termed as "trial" groups until such time as they become full. In November, 1977, the Board lowered the starting requirements from full groups to 7 paying passengers for the luxury vans and 8 paying passengers for the deluxe vans. The basic financial requirement at that time was that in no instance would a vanpool be permitted to operate where the total receipts would fail to cover all "operating costs" for the month. All costs other than depreciation were included as operating costs, i.e., costs actually incurred by the District. The net effect was to decrease the revenues that would normally be credited to the depreciation reserve fund. Monthly reports are made on the amount of fares, or depreciation, that is subsidized in this manner.

Subsequently, in January, the staff requested permission and the Board agreed to lower the requirement to five paying riders. In this case, the accumulating depreciation fund is actually used to subsidize operating costs. As already indicated in Table 4-3, depreciation accounts for about one-third of the total fares. Any subsidy beyond one-third, then, would imply that the District would be incurring expenses beyond the revenues received for a particular vanpool.

In the second case of individual vacancies that occur after a vanpool has attained full membership, the project initially developed the policy of subsidizing vanpool groups for such vacancies for one month -- as long as revenues continued to cover all costs other than depreciation. This policy has not been changed, but the staff is not satisfied with this policy in that it tends to foster financial dependency on the part of vanpool groups on an ongoing basis. The problem has been identified as one of not building a vacancy factor into the original fare structure. This option, as well as other pricing options, will be presented to vanpool groups that intend to transition to private operation.

The third case of a subgroup of vanpoolers splitting off from their original vanpool to form another vanpool is analogous to the first situation. That is, the number of operating vanpools increases and the project would like to support both unfilled vanpools until each can reach full membership.

One of the problems that arises is a combination of the above three situations occurring for the same vanpool group during the introductory period. Thus, a group can be subsidized for two months, have a vacancy occur in the fourth or fifth month, and then a little bit later be splitting into two vanpool groups along with new applicants. Questions arise as to the equity of subsidizing some groups through several of these situations and the extent to which "new" vanpool groups with "old" vanpoolers should be nurtured during an "introductory" period. If enough changes occur, the policy-making can be difficult. Many of these changes and problems may be a result of the fact that corridor-wide vanpooling services are only now being established; in the beginning, the number of changes may be greater than when a more dense system of services (i.e., more coverage) is available to persons. The staff is presently reacting to such situations with qualitative judgments as to the sincerity and

interest of the vanpoolers. Overall, a transition program will have to evolve that can cope with such contingencies.

To obtain some flexibility in dealing with such complex combinations of events, the Board of Directors passed a resolution in May allowing the General Manager to authorize a waiver of the two month limitation on the subsidy of vans. The staff recommends particular vanpool groups for such treatment based on the circumstances that exist. To date the discretionary extensions have been made for four groups as follows:

1. Pool number 3 began operations on October 24, 1977, with full membership of ten passengers and a driver. Four months later, in February 1978, a vacancy occurred but was filled within a month. Then, on May 1, after five months of operation, five of the riders and the driver transferred to a carpool, partially due to the fact that the driver did not want to take responsibility for operating a private van. The remaining five vanpoolers, none of whom wanted to be the driver, desired to continue vanpooling. A new driver and another rider were matched with the group -- producing a net of four vacancies for riders. The staff advised that this group should have two months to regain full ridership.
2. Pool numbers 16 and 18 began operations February 21, 1978. Both groups travel from different areas in Sonoma County to the Marin Civic Center. Because of employment uncertainties due to California Proposition 13, the two groups were having trouble getting commitments from individuals to fill one or two vacancies each. The staff felt that the pool groups should be able to continue until after the initial post-election developments determined the employment stability. Subsequently, one of the vanpool groups has terminated; the remaining one absorbed some of the members of the first one and expects to continue in operation.
3. Pool number 17 began operations on February 22, 1978, with three vacancies and was full within a month. One week later, however, three persons split off and joined a newly forming vanpool which provided better service for their trips. Within a month, the new vanpool was full, including a fourth rider from pool number 17. Given that the first two months for "old" pool number 17 were over in the middle of April, the staff requested a two month extension for subsidy purposes.

TABLE 4-9.

MONTHLY VANPOOL VACANCY SUBSIDY COSTS
AND ACCUMULATING DEPRECIATION RESERVE

<u>Month</u>	<u>Subsidized Seat-Months</u>	<u>Average Subsidy Per Seat-Month</u>	<u>Total Subsidy Cost</u>	<u>Additional Depreciation Funds</u>
Oct-Nov 1977	1.25	\$33.92	\$42.40	\$743.67
Dec 1977	3.41	45.61	155.54	560.89
Jan 1978	5.61	34.70	194.67	923.22
Feb 1978	14.02	47.18	661.52	1200.68
Mar 1978	29.54	42.40	1252.50	2024.00
Apr 1978	41.18	42.81	1762.91	2145.25
May 1978	44.49	44.06	1960.15	2067.98
June 1978	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
TOTAL thru May	139.50	\$43.22	\$6029.69	\$9665.69

These four cases provide the examples where the staff has felt that additional flexibility in initially subsidizing vanpools might prove worthwhile in establishing viable vanpools. Three other vanpools have been terminated after the initial two-month subsidy period due to a lack of ridership. In one case there continued to be three vacancies, and in the other two cases there were five vacancies. Another vanpool group was terminated when the group was unable to replace five members who experienced a transfer in their work location.

In the meantime, both the amount of subsidy cost and depreciation funds in excess of subsidy have grown each month. Table 4-9 presents the data for all vanpools. As can be seen, approximately \$6,000 or 40 percent of all depreciation funds collected thru May have been used for the vacancy subsidy program.

4.2.12 Van Maintenance and Use of Back-Up Vans

At the time of this writing, all vans are still covered by their 12 month or 12,000 mile warranty. Most service has been performed at dealerships, and this practice will continue as long as the vans are under warranty. After the warranty, small facilities such as service stations and tire companies will also be used. Some minor and routine maintenance has already been performed at such facilities.

The fact that the vans were purchased from a dealer 30 miles from the project offices resulted in some problems. The dealers located closer to the drivers all objected to performing warranty service on the vehicles. The Fleet Administrator discussed the situation with the dealers, and all but one of them agreed to service the vans as long as the service was spread out among the three local dealers.

The Fleet Administrator has obtained accounts at the dealers, several other service facilities, and some towing companies, and the vans are to be serviced only at these firms. Accounts will

be opened at additional facilities in the future. Appendix H includes a statement of procedures for van service and maintenance.

The back-up vans are to be provided when the basic vans have broken down or are being serviced. Two breakdowns have occurred so far. Back-up vans were driven to the locations of the breakdowns by a member of the project staff.

For normally scheduled maintenance, a staff member has usually driven a back-up vehicle to the service facility where the vanpool driver has taken his or her van. In some cases, the driver and the staff member have arranged that the staff member would drop the back-up van at the driver's home, after which the staff person would drive the regular van to the service area.

Three vans are kept as back-ups, but the project does not guarantee that a back-up van will always be provided. Through May 1978, there have been 2449 van operating days for all vanpools combined. During the same period, back-up vans were used for 163 days for a ratio of one back-up van day for every 14 days of vanpooling. This is equivalent to 1.5 days for each vanpool month. Most of the back-up days are due to scheduled maintenance and three vehicles account for 25 percent of this use. If this average use of back-up vans continues, the most efficient distribution of use of back-up vans would require a minimum of 2.3 back-up vans for 32 regular operating vans (32 vanpools x 1.5 back-up van days per vanpool month ÷ 21 vanpooling days per month). This leaves a small margin, at best, for use of the back-up vans for demonstration purposes. At present, it would appear that three back-up vans for 31 operating vanpools and one van for demonstration purposes is more realistic. And, in fact, the staff has been pressed to come up with sufficient vehicles on one occasion.

4.2.13 Seeding Process

The transition program to seed introductory vanpool groups into privately operated vanpools is only now being developed with the maturation of the first generation of vanpoolers. The transition program, at present, is limited to informational assistance in the areas of van supply, financing, maintenance and insurance and use of back-up vans if available. For these purposes, the staff hopes to form a Ridesharing Association of present vanpoolers and has developed a Newsletter medium of communication. Issue No. 1, Vol. No. 1 of The Vanguard Newsletter is contained in Appendix R.

At the end of June 1978, there are eight vanpools that have been in operation for six months or longer. One of these has received an extension of the introductory period as already discussed; the original driver dropped from the program to form a large carpool in preference to purchasing a van. The first such transitions are planned to occur in July. A full analysis of the transition program will be included in the final report.

4.2.14 Interface with Other Ridesharing Programs

RIDES for Bay Area Commuters, Inc., is the one other large-scale vanpool promotional agency in the San Francisco area.* Coordination between the two programs began in earnest in February 1978. The impetus for coordination came from the fact that both programs would be working with the same large employers in downtown San Francisco. It seemed imperative that there be cooperation on these matters so that corporation management would not be unduly burdened with separate and competing programs. In addition, each program's staff needed to know what the other program's long range plans and operating procedures would be. At a minimum, Golden Gate's staff wanted to know what long-term transition options RIDES, Inc. would be able to provide for

*RIDES is not restricted to Marin and Sonoma Counties.

introductory groups formed in the Golden Gate corridor, and RIDES, Inc. was also interested in knowing what demand was being developed in the corridor and how many vanpools would potentially transition to the RIDES, Inc. program.

The two programs have their own philosophies, styles, timing cycles, funding sources, and organizational management to which they are responsible, and the coordination has not always been easy. Some of the more important issues raised in the process are discussed below:

1. On-going Third-Party Vanpool Support vs. Private Vanpools -- RIDES, Inc. emphasizes an on-going financial and operational relationship between its vehicle supply contractor, the program and individual drivers; in particular, on-going fleet administration is part of the program and is built into the fare structure via the contract with the supplier. On the other hand, Golden Gate wishes to promote "private" vanpooling with individual driver purchase of vehicles and handling of vehicle maintenance and vanpool administration -- at lower fares than the RIDES program; this is in addition to those cases where vanpool groups want to belong to a program such as RIDES, Inc.
2. Bay-area Wide Impact vs. Corridor Impact -- At this time, the District wishes to impact its own corridor as much as possible with its own demonstration program; based on the results, the District wishes to preserve its option of having an on-going vanpool and/or carpool promotional program.
3. Centralized vs. Decentralized Ridesharing Promotion -- This is an important issue that has arisen and is related to the last issue discussed. Thus, is one central promotional organization with responsibility for a whole metropolitan area more effective or more efficient than some decentralization via corridor promotional efforts? It is interesting to note that the San Francisco-Oakland Metropolitan area is unique in having multiple public transportation districts as well as two separate vanpool promotional programs. For this market it appears that the decentralization, and potential differences in approach is a healthy element. Coordination is possible, and it is not apparent at this time that any significant efficiency would be gained through one central office.

The major elements of coordination are as follows:

1. RIDES, Inc. recognizes the preeminence of the District's program in the Golden Gate corridor as long as it is in operation.
2. Both Golden Gate and RIDES, Inc. make joint presentations to those employers that both staffs are interested in contacting.
3. Each program is free to contact other employers with monthly communication about what contacts have been made.
4. The Golden Gate staff makes RIDES, Inc. material available to vanpoolers and applicants as an option; RIDES, Inc. is welcomed to participate in presentations of options to drivers and vanpool groups.
5. Golden Gate, as an intermediary, may lease vans from RIDES, Inc. on a favorable financial basis for use as demonstration vans.

4.2.15 Project Administrative Costs by Type and by Month

The project's administrative costs, broken down by month and by 1800 series accounts, are presented in Appendix D. Table 4-10 extracts the figures for staff services, which include salaries and fringe benefits, and assigns them to one of the following five categories:

	<u>Codes</u>
1. Project Administration & Data Collection	1800 + 1805
2. Marketing	1802
3. Pool Organization (Matching)	1803
4. Driver & Transition Services	1804 + 1807
5. Fleet Administration	1801 + 1806

Overhead and clerical labor costs are not broken down by type of activity and are assumed to apply to each task proportionately to

TABLE 4-10.

ALLOCATION OF STAFF PROFESSIONAL SERVICES BY TASK BY PROJECT PERIOD

	OCT '76 - JUN '77	JULY - SEPT '77	OCT - DEC '77	JAN - MAR '78
Project Adm. & Data Coll.	\$16,300 95%	\$8,600 60%	\$9,700 48%	\$12,800 50%
Marketing	900 5%	2,300 16%	3,900 19%	5,000 20%
Pool Organization		400 3%	5,400 27%	5,400 21%
Driver & Transition Services			50 -	500 2%
Fleet Administration		3,100 21%	1,300 6%	1,700 7%
	\$17,200 100%	\$14,400 100%	\$20,350 100%	\$25,400 100%

its share of the total. Project administration and data collection activities are presently taking half of the staff resources while marketing and pool matching consume another twenty percent each. Driver training, transition services and fleet administration consume the remaining ten percent of staff resources.

Table 4-11 provides a broader look at all project expenses including staff services, material expenses, outside consulting work and equipment purchase. Again, basic project administration expenses, to the extent possible, are allocated to the above five basic task areas. In this case, the figures indicate that half of all administrative resources are expended on marketing, one-third on administration and data collection, one-tenth on matching and five percent on driver training, transition services and fleet administration.

Both tables indicate a trend of less administration and more marketing as project systems are established. It should also be noted that \$6,887 of the depreciation fund has been used to subsidize vacancies in establishing the pool groups. This could be considered as further resources spent for marketing purposes.

4.2.16 Operational and Financial Characteristics of Vanpools

Table 4-12 summarizes the data from the monthly staff reports on vanpool operations (Appendix J) through May 1978. Table 4-13 summarizes the data from the monthly staff reports on vanpool finances through May 1978. Table 4-14 provides a summary report of vanpool performance based on the operations and financial data; a few of the performance indicators are reported separately for ten- and twelve-passenger vans.

To date, a total of 340 individual persons have started vanpooling in 31 different vanpools during this period; 43 of these persons are temporarily inactive for one reason or another and 10

TABLE 4-11.

ALLOCATION OF ALL PROJECT ADMINISTRATIVE EXPENSES BY TASK BY PROJECT PERIOD

	OCT '76 - JUN '77	JULY - SEPT '77	OCT - DEC '77	JAN - MAR '78
Project Adm. & Data Coll.				
Staff Services (1800)	\$16,300	\$7,400	\$7,950	\$6,600
Staff Services (1805)	-	1,200	1,800	6,200
Travel (1816)	-	100	200	1,100
Legal Fees (1820)	-	-	-	600
	<u>16,300</u>	<u>8,700</u>	<u>9,950</u>	<u>14,500</u>
	95%	38%	27%	31%
Marketing				
Staff Services (1802)	900	2,300	3,900	5,000
Local Transp. (1810)		600	1,100	100
Marketing Exp. (1818, 21)		4,100	10,700	14,600
Marketing Fees (1821)		3,500	4,300	4,400
Part of Van Use (1840-3)		100	100	100
	<u>900</u>	<u>10,600</u>	<u>20,100</u>	<u>24,200</u>
	5%	46%	54%	52%
Pool Organization				
Staff Services (1803)		400	5,400	5,400
Consulting Services ()		<u>400</u>	<u>5,400</u>	<u>5,400</u>
		2%	15%	12%
Driver & Transition Services				
Staff Services (1804)		-	50	200
Staff Services (1806)			<u>50</u>	<u>300</u>
			-	500
				1%
Fleet Administration				
Staff Services (1801)		1,500	1,300	1,700
Staff Services (1807)		1,600		-
Most of Van Use (1840-3)		<u>300</u>	<u>300</u>	<u>400</u>
	<u>0</u>	<u>3,400</u>	<u>1,600</u>	<u>2,100</u>
		14%	4%	4%
Subtotal	<u>17,200</u>	<u>23,100</u>	<u>37,100</u>	<u>46,700</u>
	100%	100%	100%	100%

TABLE 4-11. (cont.)

ALLOCATION OF ALL PROJECT ADMINISTRATIVE EXPENSES BY TASK BY PROJECT PERIOD

	(ADDITIONAL EXPENSES)			
Labor-Clerical (1809)	600	4,100	8,400	6,200
Overhead (1808)	1,800	1,800	2,900	3,100
Other Expenses (1811-15,17)	200	1,500	4,000	3,000
Subtotal	<u>2,600</u>	<u>7,400</u>	<u>15,300</u>	<u>12,300</u>
Total Administration	19,800	30,500	52,400	59,000
Equipment (1830-1)	<u>1,600</u>	<u>318,200</u>	<u>600</u>	<u>0</u>
TOTAL	<u>\$21,400</u>	<u>\$348,700</u>	<u>\$53,000</u>	<u>\$59,000</u>

have terminated, leaving 287 active vanpoolers in 30 vanpools for an average of 9.6 vanpoolers per vanpool (not per trip).

There have been 116 vanpool months of operation: 2449 vanpool days ÷ 21 days/month. Approximately 5,000 one-way passenger trips have taken place, serving almost 40,000 one-way passenger trips with 200,000 vehicle miles and 20,000 gallons of gasoline (10 mpg). A total of 1,500,000 passenger miles were served. Thus, during the first eight months of project operations, the introductory vanpools averaged nearly 8 passengers per vehicle trip for a 75 percent occupancy of seats. Over 300 passenger miles have been served with each vehicle trip and over 75 passenger miles have been served with each gallon of gasoline. There have been only 2 breakdowns of vehicles during vanpool operations and none at other times. Back-up vans have been used for 7.5 percent of all vanpool days of operation.

A total of \$46,000 in fares have been collected; \$28,000 have been spent on vanpool operating expenses; \$9,700 remain in the depreciation reserve and \$8,400 remain in the operating expense reserve. Revenues for gas, the only operating expense that can be totally accounted for at present, are running approximately 8 percent ahead of expenses. Variable costs, in general, are averaging \$.07 per vehicle mile for the vans which have averaged 6,000 to 7,000 miles of operation. Insurance costs are averaging \$.06 per vehicle mile and less than \$.01 per passenger mile. The latter figure would decrease with greater occupancy. Revenue (or fares) is averaging roughly \$1.20 per passenger trip or \$.03 per passenger mile. This latter figure would not be influenced by greater occupancy.

Note that, even with initial vacancies during the introductory period, the vanpools have averaged a 75 percent occupancy rate. Thus, the alternate fare structure envisioned in the Vanguard Newsletter and used in other programs, would suffice to cover a general vacancy rate across a fleet of vanpools.

TABLE 4-12.

GOLDEN GATE VANPOOL OPERATIONS BY MONTH
(October 1977-June 1978)

Mo.	No. of Van Pools	Days In Oper.	One-Way Veb. * Trips	Number of Van Poolers			One-Way Person Trips		Monthly Veh. Personal		One-Way Trip ** Miles	Gasoline		No. Days Back-Up Van Used		Number of Breakdowns		
				Total Prev. Month	Start This Month	Stop This Month	Total End of Month	To Work	From Work	Total		Van Pooling	Personal	Total	Gal.	Cal./Mile	Sch. Maint.	Repairs
Oct.	3	45	90	0	36	15	21	443	437	880	4097	29	4126	46	0	0	0	
Nov.	4	71	142	21	22	0	43	603	579	1182	6868	300	7168	48	14	1	0	
Dec.	5	104	208	43	8	2	49	855	810	1665	10018	797	10815	48	13	0	0	
Jan.	8	168	336	49	30	3	76	1415	1365	2780	14769	757	15526	44	2	0	0	
Feb.	17	269	538	76	89	5	160	2256	2197	4453	22360	1012	23372	42	0	0	0	
Mar.	25	549	1098	160	99	15	244	4326	4191	8517	44088	2064	46152	40	0	0	0	
Apr.	30	590	1180	244	52	12	284	4632	4513	9145	48504	2407	50911	41	0	1	0	
May	30	653	1306	284	20	17	287	5085	4929	10014	53418	2628	56046	41	0	0	0	
Jun.																		
PTD***		2449	4898	-	356	69	287	19615	19021	38636	204122	9996	214118	42	154	29	2	0
Vanpooler Switches					-16	-16												
Individual Vanpoolers					340	53												
Inactive Vanpoolers						-43												
Terminated Vanpoolers						10												

*Sum for all vehicles.

**Average vanpooling mileage per one way-vehicle trip.

***Project-to-date thru May 1978.

TABLE 4-13.

VANPOOL OPERATIONAL REVENUES AND EXPENSES
BY TYPE - THRU MAY 1978

(Approximately 214,000 Van Miles)

<u>Item</u>	<u>Revenue</u>	<u>(-) Expense</u>	<u>(+) Personal Miles =</u>	<u>Reclassified</u>	<u>Net</u>
Gas	\$13,978	\$13,621	\$702		\$1,059
Tires	2,057	116	102		2,043
Oil/Lube	2,996	569	150		2,577
Tune Up/Maint	2,966	354	150		2,792
Parking	611	611			0
Insurance	12,781	12,781			0
Deductible	289				289
Accident Repair	0	266			(266)
Depreciation Reserve	9,666	0*			9,666
Personal Mileage		(1,104)	(1,104)		0
Rounding	(74)				(74)
Other	705	705			0
TOTAL	\$46,005	\$27,919	\$ 0		\$18,086
Depreciation Reserve					-9,666
Operating Reserve for Potential Expenses					\$8,420

*No expense is attributed to depreciation at this time

TABLE 4-14.

SUMMARY PROJECT VANPOOL
OPERATIONAL AND FINANCIAL
PERFORMANCE - THRU MAY 1978*

	<u>10-PAX</u>	<u>12-PAX</u>	<u>TOTAL</u>
1. Total Vehicle Trips (one-way)	2,518	2,380	4,898
2. Total Seat Trips (one-way)	25,180	26,180**	51,360
3. Total Passenger Trips (one-way)	19,764	18,872	38,636
4. Passengers Per Vehicle Trip	7.8	7.9	7.9
5. Percent Seats Occupied	78%	72%	75%
6. Total Vehicle Mileage			204,000
7. Total Gallons of Gasoline			20,000
8. Miles Per Gallon of Gasoline			10.2
9. Passenger Trips Per Gallon of Gasoline			1.9
10. Mean Vanpooler Commute Mileage***			40
11. Total Passenger Miles			1,545,000
12. Passenger Miles Per Vehicle Trip			315
13. Passenger Miles Per Gallon of Gasoline			77
14. Total Variable Costs			\$14,527
15. Variable Cost Per Vehicle Mile			\$.07
16. Total Insurance Cost			12,781
17. Insurance Cost Per Vehicle Mile			\$.06
18. Insurance Cost Per Passenger Mile			\$.01
19. Total Revenue			\$46,005
20. Revenue Per Vehicle Mile			\$.23
21. Revenue Per Passenger Trip			\$1.19
22. Revenue Per Passenger Mile			\$.03

*All figures in this table are calculated for vanpooling operations only and exclude mileage, costs and revenues attributed to personal use of vans by the drivers.

**Seats in the "twelve passenger" vehicle are more realistically counted as eleven.

***This figure is drawn from vanpooler surveys and is slightly less than the average van trip distance of 42 miles.

In addition to vacancies and some parking subsidy, the two cost items not built into the fare structure are 1) the use of back-up vans and 2) fleet administration. The operating costs of back-up vans are paid for by vanpoolers through the mileage charges; increased insurance costs are small due to the fact that vans revert to a "lot" or "staff" rate when being repaired. Depreciation charges, based on time, can be figured on the basis of a need for back-up vans for a range of 7.5 percent to 10 percent of the time. Table 4-3 indicated that depreciation of the regular van amounted to one-third of all fares. The additional depreciation cost for back-up vans, then, can be estimated to be 2.5 percent to 3 percent of the present fares.

An indication of the costs of fleet administration as a proportion of fares is possible with March 1978 data (the latest month of complete data). During that month, approximately \$1,200 of costs were accounted to fleet administration and fleet handling. During the same month \$9,000 were collected in fares. However, full occupancy or an alternate fare structure would have brought in closer to \$10,000 in fares. In this case fleet administration costs would have amounted to an additional 12 percent of fares.

5. PROJECT LEVEL OF SERVICE

This chapter describes and analyzes all aspects of the supply of vanpool service in the Golden Gate Bridge District demonstration project. Supply is discussed as follows:

1. Coverage
2. Project Responsiveness to Applications
3. Price (Fare)
4. Travel Time
5. Drivers
6. Reliability
7. Safety and Comfort, and
8. Private Vehicle Supply and Seeding Options.

5.1 VANPOOL COVERAGE

Coverage may be defined as the actual supply of service; the other details of that service being described in later sections of this chapter. From the perspective of an applicant, adequate coverage is defined by answers to the following questions:

1. Is a vehicle available?
2. Is a driver available, and are there at least four other applicants available?
3. Do these people live in my neighborhood?
4. Do they work near my office?
5. Do they start work about the same time I do? and
6. Do they get off work about the same time I do?

A positive answer to all of these questions indicates that the coverage is adequate.

All of these questions, except the first one, are dealt with in the matching process and the answers are directly related to demand or density of demand. The evaluation of vanpool coverage then, can be accomplished in two parts: vehicle availability

and density of demand. In addition, project policy has an impact on coverage.

5.1.1 Project Policy

In an effort to put a significant number of vans on the road very quickly, the Bridge District Board of Directors revised an initial policy of serving only commuters living in Sonoma or Marin County and working in San Francisco. The new policy allows the use of project vans for groups which have at least one trip end in the Golden Gate Corridor. This policy was moderately successful in increasing the number of operating vanpools. As shown in Table 5-1 two vanpool groups originated outside of the corridor from Berkeley in Alameda County.

5.1.2 Vehicle Availability

In the Golden Gate demonstration project, vehicle availability has not yet become a constraint. The project has 35 vans. One is used by staff for promotion and demonstration and three are used as back-up vehicles for vans requiring maintenance or temporary replacement. That leaves 31 vehicles available. In April and May, 1978, 30 vanpools were in operation, but in June the number dropped to 25.

5.1.3 Density of Demand

Density of demand is composed of the geographic density of origins and destinations together with the density of arrival times and departure times at the destination. Consideration had been given to comparing the density of demand of project applicants with that of the general commute population; however, the implementation of a general commute survey designed to gather this data has been deferred until a later stage of the project.

TABLE 5-1.

VANPOOL COVERAGE COMPARED TO AVAILABLE TRANSIT SERVICE

Origin	Destination	No. of Vanpools	Bus Service	Club Bus
<u>Market #1</u>				
Novato	Presidio	1	yes	no
Petaluma	"	1	yes	yes
San Rafael	"	1	yes	no
Mill Valley	Financial District	1	yes	no
Novato	"	2	yes	no
Petaluma	"	4	yes	yes
Rohnert Park	"	2	yes	yes
Cotati	"	1	yes	no
Santa Rosa	"	3	yes	no
Petaluma	S.F. Federal Building	1	yes	no
Novato	S.F. Firemen's Fund	1	no	no
Petaluma	"	1	no*	yes
Santa Rosa	V.A. Hospital	1	no	no
<u>Market #2</u>				
Berkeley**	Sonoma State College	1	no	no
Petaluma	Sausalito	1	no	no
Santa Rosa	Marin Civic Center	1	no*	no
Rohnert Park	"	1	no*	no
Napa/Sonoma	"	1	no	no
Rohnert Park	San Rafael Firemen's Fund	1	no	no
Vallejo **	"	1	no	no
Santa Rosa	Sonoma State College	1	no*	no
Santa Rosa	San Rafael PG&E	1	yes	no
Santa Rosa	San Quentin **	1	no*	no

*Though transit does operate on this commute route, it is too time consuming to be considered a viable commute mode.

**Outside of the Highway #101 corridor

This interim report focuses on the comparison of active vanpools with the existing supply of transit and club bus service.

Table 5-1 lists all vanpools which had been formed as of June, 1978. This table indicates that over 60 percent (19) of the 31 vanpool groups ever formed were served reasonably well by Golden Gate Transit and/or club buses while nearly 40 percent (12) were not well served. Only one vanpool origin and seven vanpool destinations are not well served by transit.

It can be stated, therefore, that vanpool coverage extends somewhat beyond the coverage of the existing transit system in the corridor, but the existence of reasonable transit service does not seem to discourage formation of vanpools.

5.2 PROJECT RESPONSIVENESS TO APPLICATIONS

"Project responsiveness" is an important element of service to potential vanpoolers, partly because it represents the results of their first contact with the project but also because staff responsiveness may be perceived as a reason the applicant becomes a vanpooler. At this time sufficient data has not been collected to evaluate either quantitative or qualitative measures of project responsiveness. The matching process is the element which contributes most to responsiveness. The final report will include an evaluation of that process.

5.3 PRICE (fare)

When asked for their "primary reason for choosing vanpooling," 35 percent of the 262 vanpoolers responding to the initial survey cited cost savings. The second most important reason received only 15 percent of responses. Thus, the price ranks as the most important reason among vanpoolers for selecting this mode.

About half of the respondents had previously commuted by car. Of the 52 who had driven alone or with just one other passenger, 45 percent cited cost savings as their primary reason for changing mode, more than four times as many as cited the #2 reason. This is clear indication of the importance of cost, particularly among those who had traveled in the vehicles with the lowest occupancy rate.

Vanpooling is always less expensive than commuting in a one- or two-occupant auto; frequently less expensive than commuting by bus or in a 3-person carpool; and, occasionally, less expensive than the 5-person carpool commute.

Section 4.2.5 of this report explains the principles and formulas used to determine fares for Golden Gate introductory vanpools. This section discusses how the resulting fares compare with other modes available to commuters in the corridor. In the process, it examines the monthly fares for vanpooling and the daily fares experienced by the average vanpooler who does not use the service for all commute trips.

5.3.1 Monthly Vanpool Fares

Figure 5-1 shows monthly commute costs by distance for deluxe and luxury van, Golden Gate Transit, and private autos. The figure applies to both Market #1 and Market #2. Auto costs are shown by various costs per passenger mile (15¢ for single occupant, 5¢ for three person carpool and 3¢ for a 5 person

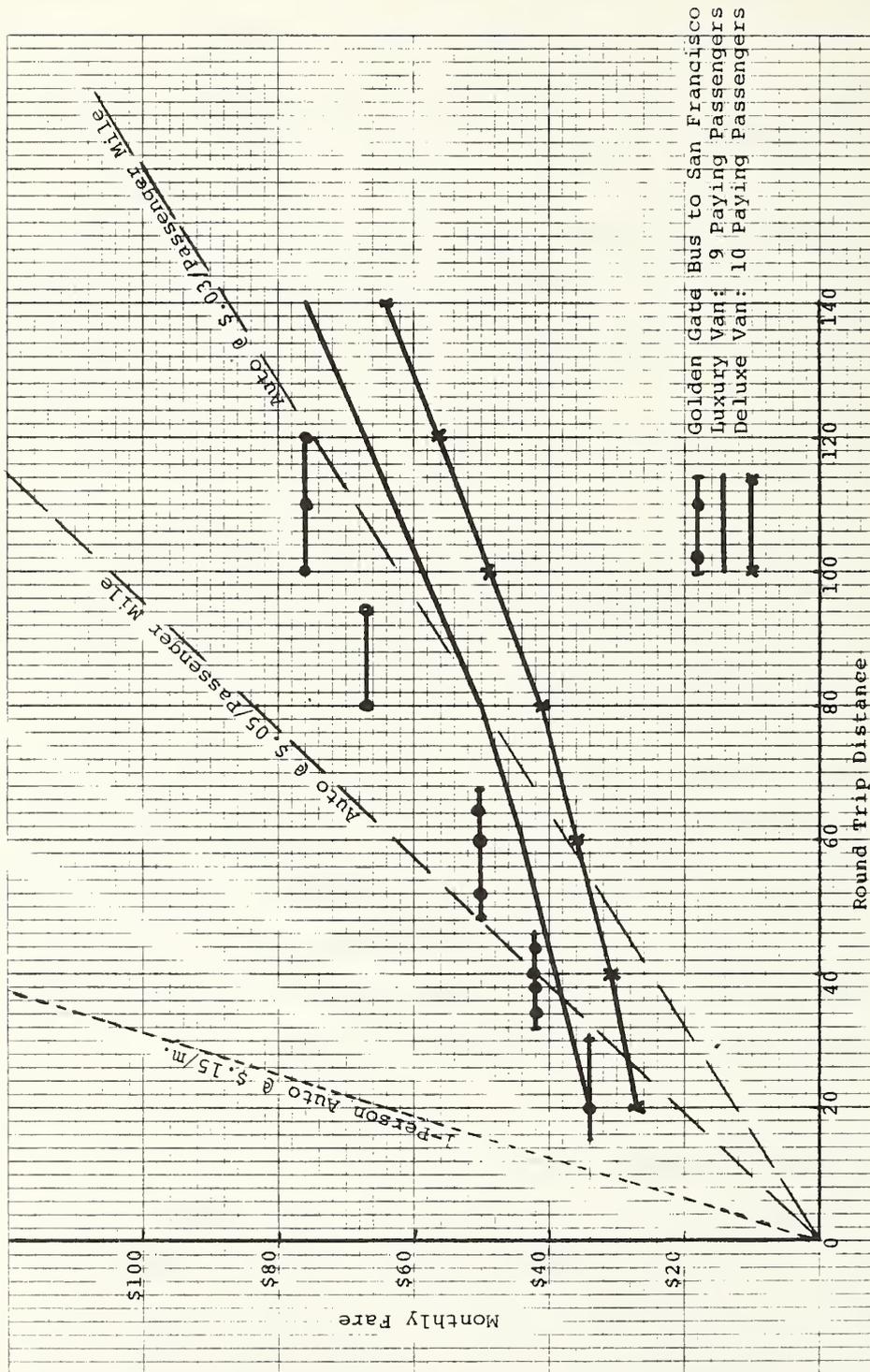


FIGURE 5-1-1. MONTHLY COMMUTE COSTS BY DISTANCE AND MODE

or "serious" carpool). Bridge tolls (at a 20 percent commuter discount) are included for the single occupant car in Market #1, but not for carpools where no toll prevails. Parking charges are not included in this basic analysis. However, if parking charges are assumed to be \$3.00 per day, close to the upper limit for San Francisco, then monthly commute costs would increase by \$63.00 for single occupant, \$21.00 for 3-person, and \$12.50 for the 5-person carpool.

Van fares are calculated as in Chapter 4, and represent the "theoretical best" monthly cost. That is, they do not include any additional cost incurred by a vanpooler who must work late and take the bus home. Bus fares are based on November 1977 charges with 20 percent discount for commute ticket books.

In June, 1978, Market #1 deluxe vanpools averaged 79 miles* round trip while luxury pools averaged 93 miles. Thus Market #1 vanpoolers, on the average, paid less per month for commuting than all other modes, including very "serious" carpoolers. Market #2 vans averaged slightly lower mileages* with similar cost comparisons, except that luxury poolers paid about \$2 more per month than a serious carpooler (3¢ per passenger mile) might expect to pay.

Table 5-2 summarizes Figure 5-1 by listing the round trip commute distances beyond which monthly vanpool fare becomes less expensive than the other modes. Note that auto commuters who experience costs of 15¢ per passenger mile always pay more than vanpoolers and bus commuters.

* In Market #1, daily round trip mileage ranged from a high of 122 miles to a low of 30 miles for deluxe vans, 138 miles to 62 miles for luxury vans. In Market #2, deluxe vans traveled between 88 and 54 miles (averaging 70 miles) while luxury vans traveled 82 and 64 miles (averaging 73 miles).

TABLE 5-2.

ROUND-TRIP COMMUTE DISTANCES BEYOND WHICH MONTHLY VANPOOL FARES
ARE LOWER THAN AUTOMOBILE COSTS AND BUS FARES

(Miles)

	Auto Cost Per Passenger Mile	Golden Gate Transit Bus Fares
	15¢*	3¢***
Luxury Van: 9 paying riders	all distances	35 75 30
Deluxe Van: 10 paying riders	all distances	25 55 For all distances

* Single occupant automobile.

** Three person carpool.

*** Five person carpool.

5.3.2 Average Daily Vanpool Fares

Vanpoolers pay a flat monthly charge, but do not, on the average, use the van every day or for every commute trip. Thus, the average daily fare is somewhat higher than the monthly fare divided by the number of work days in the month. For the month of May 1978, the attendance factor is estimated to be 80 percent, or paying vanpoolers ride on an average of four out of five days.* Thus, the average daily fare is about 25 percent higher than the "theoretical best" daily fare.

5.4 TRAVEL TIME

This section describes in-vehicle time and total travel time for vanpoolers and compares the results with travel times in the previous mode. Wait time is discussed separately in the section on reliability.

Data used for the analyses in this section are derived from the initial and supplementary surveys of vanpoolers and from on-board trip logs which were conducted on three consecutive days in June, 1978. Because the survey questions related only to the trip to work, these analyses and conclusions are based on just half of the picture.

While former transit riders cited "saves time" as the second most important reason for switching to vanpooling, those who had previously commuted by auto (single and double occupant as well as former carpoolers) were clearly not induced to join vanpooling

*Source is Staff Vanpool Operations Report,
May 1978.

$$\frac{\text{Average number of actual riders per van}}{\text{Average number of paid riders per van}} = \text{attendance factor}$$

because of any change in their travel time. Subsequent analysis of change in total morning travel time reported revealed that:

1. Former transit users saved over 9 minutes,
2. Former carpoolers* and one and two occupant auto commuters added nearly 11 minutes.

This implies that vanpool travel times compete well with transit travel times, but poorly with private auto (including carpool) travel times.

5.4.1 Total Travel Time

The primary comparison to be made is total travel time for the vanpool mode versus the previous mode. Total travel time includes access time, wait time and egress time as well as in-vehicle time. To determine total travel time by the previous mode, question 14 of the introductory survey asks "What was your usual TOTAL one-way travel time to work?" To determine total travel time by vanpool, question 11 of the supplementary survey asks "What time do you usually leave home?" and "What time do you arrive at work?" The difference represents total travel time by vanpool.

The change in total travel time, as reported on the project surveys, for each individual** is depicted in Table 5-3 by increments of time. Values range from a savings of 41 minutes to an addition of 55 minutes. The mean was a savings of 41 seconds; the median was essentially no change at all.

*Data were collected within GGBHTD's established categories of auto (1 & 2 passenger vehicles) and carpool (3 or more passengers).

**Only 103 respondents answered both questions in a manner that could be compared.

TABLE 5-3.

DISTRIBUTION OF CHANGE IN REPORTED TOTAL TRAVEL TIME
(VANPOOL TIME MINUS PRIOR TIME)

	Change in Travel Time (min.)	% of Riders
	40+	1.0
Vanpool	30 - 39	1.0
Saves	20 - 29	15.5
Time	10 - 19	15.7
	1 - 9	13.6
- - - - -	0	0
Vanpool	1 - 9	15.6
Adds	10 - 19	15.6
Time	20 - 29	9.8
	30 - 39	1.0
	40+	

These data lead to no significant conclusions. It is somewhat surprising, however, to note that many vanpoolers (12.8%) add so much time (20 minutes or more) to their morning commute over their prior mode. Presumably the additional travel time is outweighed by other factors such as cost savings.

5.4.2 In-Vehicle Time

In-vehicle times for the previous mode of vanpoolers is based on responses to question 15 of the initial vanpooler survey and the on-board trip survey implemented over three consecutive days. Problems of internal consistencies with the data and the fact that the vanpoolers' responses are only estimates of their in-vehicle travel time result in tentative (general) conclusions at this time. A completed interpretation of in-vehicle times will be included in the final report.

The data suggests that the mean in-vehicle travel times are 59 minutes by the previous mode and 57 minutes by vanpool. From a national perspective, these are very long commute times and have an important impact on the transferability of the findings of this demonstration. The general conclusion is that roughly 10 percent of vanpoolers now experience in-vehicle times between 45 minutes and one hour as opposed to times less than 45 minutes in their previous mode. There is no significant change for those who spend more than an hour in their commute vehicle.

5.5 VANPOOL DRIVERS

Before the vanpool service becomes available to potential riders, an adequate number of drivers and back-up drivers for the vans must have responded and been selected. The factors involved in the decision to become a driver are more complex than those involved in the decision to become a rider. A list of the responsibilities (costs) and benefits to drivers in the Golden Gate project are as follows:

Driver Responsibilities (Costs)

1. Drives the van according to a fixed schedule
2. Experiences the longest travel time relative to commute distance
3. Collects fares and keeps financial and operational records
4. Obtains gas
5. Provides or arranges for maintenance and servicing of the van
6. Acts as major liaison between the riders and the project staff
7. Must arrange for back-up coverage (driver or vehicle)

Benefits to the Driver

1. Receives free rides to work
2. Use of the van after hours, at \$.11 per mile for up to 350 miles per month.
3. Requires investment on one less personal vehicle

Of the first generation of applicants, 20 percent reported some interest in being a driver. An additional 20 percent indicated interest in serving as a back-up driver. Half of these stated that it was their primary or only role interest. Thus, the set of inducements for drivers appears to solicit an adequate number of driver applications to be matched with the volume of riders. For particular origin-destination patterns, however, there have been cases in which staff was unable to find a driver applicant for a matched group of riders. In these cases, staff was not

very successful in recruiting riders to be drivers, and subsequent targeted advertising efforts were unproductive. Therefore, it would seem at this stage that the availability of drivers could tend to limit the growth of the project. Once a driver has been found for a group of riders, staff has experienced no significant problems with qualifications of age and driving records.

Drivers cite cost savings (39%) as the primary reason for vanpooling, along with the ability to own one less car (10%). Drivers have use of the van for weekend or evening trips for up to 350 miles a month at a charge of 11¢ a mile. However, of the 31 vanpools, only 7 averaged more than 150 personal miles per month; 18 averaged less than 50 miles per month, and 7 drivers never used their van for the non-work trips. This suggests that the personal use of the van is not a critical incentive. It should be noted, however, that personal use is increasing. Two important facts about the 31 vanpool drivers are:

1. Commute cost savings is the most important primary reason for drivers to join a vanpool (12 out of 31).
2. The most successful method of reaching potential drivers has been through employer promotions (8 out of 31 drivers).

5.6 VANPOOL RELIABILITY

Reliability will be measured and analyzed in this section in two parts: reliability of the vehicle, and reliability of the driver. The former relates to breakdown of vehicles; the latter relates to pick-up and arrival times, and availability of the driver or back-up driver.

5.6.1 Reliability of the Vans

The Golden Gate demonstration began the project with new vans and at this point in the program they are considered to be low mileage vehicles.

As of the end of June, 1978, only 2 breakdowns had been reported in 250,000 miles of project use, for an average of one breakdown per 125,000 miles. It is of interest to note that during the same period of time, Golden Gate Transit buses experienced 218 breakdowns in 6.4 million miles for an average of one per 29,400 miles. This is not a true comparison; some buses are more than 7 years old and have logged over 300,000 miles. However, Golden Gate Transit almost always wins national awards for bus fleet maintenance and therefore its record is certainly representative of the transit mode. It can be concluded then, that vehicle reliability for this vanpool demonstration (with new, low mileage vehicles) is very high relative to transit.

5.6.2 Reliability of the Drivers

As of the end of June, 1978 only 1 trip was missed because of a failure of the driver or alternate driver to show up. In this instance more than half of the members of a vanpool group (including the driver and alternate drivers) enjoyed a 4 day weekend. The other members were contacted and carpooled on that day.

Reliability can also be analyzed by observing wait times at pick-up locations and variability of arrival times. Table 5-4 shows the distribution of wait times by increments of time as recorded on the three day trip logs.

TABLE 5-4.

DISTRIBUTION OF REPORTED WAIT TIMES AT PICK-UP LOCATIONS

<u>Wait Time (min.)</u>	<u>% of Riders</u>	<u>Cumulative %</u>
0	62.0%	62.0%
1-5	26.9	88.9
6-10	7.8	96.7
11-20	2.8	99.5
20+	0.5	100.0

The key points to notice in this table are that there was zero wait time reported on 62 percent of the trips and 5 minutes or less on nearly 90 percent of the trips. When wait times were averaged for each individual, similar results were observed and the mean average wait time was 2.04 minutes.

Morning arrival times and evening pick-up times at the work end of the trips were also recorded on the three day trip logs. Because of variances in the data, it will be more completely analyzed as part of the final report.

The supplementary survey (conducted a few days before the trip logs were taken) asked vanpoolers to rate their driver in terms of "reliability of pick-up and delivery on time." Ratings were also requested for driver "communication" and "organizational abilities," both of which can be considered reliability-related attributes. The findings are listed in Table 5-5.

TABLE 5-5.

VANPOOLERS' PERCEPTIONS OF THEIR DRIVERS' RELIABILITY

(%)

<u>Rating</u>	<u>Schedule Reliability</u>	<u>Communication</u>	<u>Organization</u>
Excellent	79	66	65
Very Good	14	23	23
Good	6	7	9
Fair	1	4	3
Poor	<u>0</u>	<u>0</u>	<u>0</u>
	100	100	100

More than 95 percent of the riders rated their driver good or better on all three factors. The highest rating was for schedule reliability, perhaps the most important factor for a transportation mode.

At this interim stage, it can be concluded that vanpooling is a reliable mode of commute transportation.

5.7 SAFETY AND COMFORT

Safety is measured quantitatively; comfort is measured strictly by the perception of users.

5.7.1 Safety

As of June, 1978, 1,889,553 passenger miles had been logged and three accidents had been recorded. All accidents were of a "fender bender" nature; one was the fault of a vanpool driver and two were not; there were no injuries. The accident rate, then, is about one per 630,000 passenger miles.

5.7.2 Comfort

Deluxe vans have bench seating while luxury vans have reclining airline seats. All vans are Plymouth Voyagers with air conditioning, automatic transmission, AM radios, power steering, power brakes and carpeting throughout.

The supplementary survey asked vanpoolers to rate various aspects of their new commute mode that relate to comfort, including vehicle features and driver behavior.

The survey results related to comfort of the vehicle follow in Table 5-6. A rating for air conditioning and separate ratings by luxury passengers versus deluxe passengers are not available at this time. Both of these will be done for the final report.

The vanpoolers perceived comfort to be quite good, with 90 percent rating it as good or better. The rating of the non-smoking rule received the highest number of excellents, 67 percent. The ratings of seating, including the bench seating, received the most favorable score; 93 percent good or better; noise level rated 86 percent and lighting 78 percent good or better, respectively. Subsequent to the survey, reading lights were installed in all deluxe vans.

TABLE 5-6.
VANPOOLERS' PERCEPTIONS OF COMFORT FACTORS
(%)

	<u>Seating</u>	<u>Noise</u>	<u>Lighting</u>	<u>Non-Smoking Rules</u>
Excellent	40	23	23	67
Very Good	30	33	31	16
Good	23	30	24	7
Fair	5	10	13	4
Poor	2	4	9	6

The supplementary survey also gave riders an opportunity to rate their drivers. The drivers received high ratings on their driving ability (95 percent good or better), consideration for passengers (99 percent), and cleanliness of the van (96 percent).

TABLE 5-7.
RIDERS' PERCEPTIONS OF THEIR DRIVERS
(%)

	<u>Driving Ability</u>	<u>Driver Consideration</u>	<u>Cleanliness of Vans</u>
Excellent	52	72	56
Very Good	27	16	29
Good	16	11	11
Fair	4	1	4
Poor	1	0	0

Two other features relating to vanpooler comfort were rated: smoking regulations and the compatibility of the group. This vanpool project prohibits smoking in the vans and 90 percent of the group believed these regulations were good, very good or excellent. Ninety-six percent rated the compatibility of their pool as good or better.

Based on driving records and the perceptions of vanpoolers, we can conclude that vanpooling is a safe and comfortable mode of commute transportation.

5.8 PRIVATE VEHICLE SUPPLY AND SEEDING OPTIONS

By the end of June, 1978, a final policy on seeding had not been adopted for the project, and none of the vanpool groups had transitioned to private or leased vans. At this time, four vanpool groups have been in operation for seven or eight months and three have been in operation for six months.*

*Three groups transitioned in July, 1978, two in October.

6. PROJECT DEMAND

This chapter describes the demand for project services and its composition. Demand is analyzed by reviewing the growth in demand for vanpools, vanpooler stability, mode split and market penetration, and vanpooler demographics.

6.1 DEMONSTRATION VANPOOLS

The evaluation covers the project during its first nine months of operation (October, 1977 through May, 1978). During this time approximately 1350 persons submitted applications to vanpool and Table 6-1 illustrates the rate at which applicants were placed into vanpools over the nine months. The greatest activity occurred in February and March when 17 vanpools of the total 30 van fleet were implemented.

TABLE 6-1.

PROGRAM GROWTH BY MONTH

<u>Month</u>	<u>Number of Vanpoolers</u>	<u>Number of Vanpools Operating</u>	<u>Number of Poolers per Vehicle</u>
Oct.	21	3	7
Nov.	43	4	10.8
Dec.	49	5	9.8
Jan.	89	8	11.1
Feb.	160	17	9.4
March	244	25	9.8
April	284	30	9.5
May	287	30	9.6
June	240	25	9.6

The maximum growth in demand occurred during the winter months concurrent with the third and fourth month of operations (Table 6-1). Demand fell off in June when five vanpools terminated for lack of riders. These terminations are discussed more fully in Section 6.3, Vanpooler Stability.

With the fourth month of vanpool operations casual or occasional riders became a part of the project. Casual riders may be persons subletting a regular rider's seat, someone the driver has made direct arrangements with or potential poolers listed with the project staff. The daily fare charged is the monthly fare divided by 21.

Project policy allows a driver to provide up to three consecutive days of riding to one person at no charge. Other than this, arrangements for casual riders are informal and left to the discretion of each driver. During the month of May there were 36 inbound and outbound casual riders, constituting less than one percent of that month's passenger trips.

Though early expectations were that all vanpools would originate in Marin or Sonoma counties and terminate in San Francisco, the demand splits into the two district markets. These market splits are summarized in Table 6-2.

Twenty vanpools serve Market #1, originating in Marin or Sonoma and terminating in San Francisco. The average round trip commute distance is 85 miles. Eight of the ten vanpools serving Market #2 originate and terminate in Marin or Sonoma. The ninth and tenth vans originate in nearby counties and terminate in Marin or Sonoma County. The average round trip mileage for Market #2 vanpools is 71 miles.

TABLE 6-2.

SUMMARY OF VANPOOLS BY ORIGIN AND DESTINATION

Origin	Destination	Average Round Trip Mileage
Market #1:	<u>San Francisco</u>	
Marin	6 vans	53 miles
Sonoma	14 vans	98 miles
Market #2:	<u>Marin</u> <u>Sonoma</u>	
Marin	- -	-
Sonoma	8 vans -	69 miles
Alameda	- 1 van	90 miles
Solano	1 van -	65 miles

6.2 DEMAND BY VEHICLE TYPE

The project's 35 van fleet consists of 18 11-passenger deluxe vans and 17 9-passenger luxury vans. The greatest demand is for the customized higher priced luxury vans; at the time of this evaluation, all 17 luxury vans were operating. Seven groups, some poolers in deluxe vans and some non-poolers waiting to start, were wait-listed for a luxury van. This is a relatively unique demand characteristic for a vanpool program. Other than the vanpool programs sponsored by Aerospace Corporation and Commuter Computer (both in Los Angeles, Ca.) the greatest demand is typically for the more economical bench seat van. An interim conclusion is that the extremely long commute distance in the Golden Gate corridor influences this preference for comfort over available economies.

6.3 VANPOOL AND VANPOOLER STABILITY

During the latter part of May and June, five vanpools terminated. One of these, serving Sonoma State College, terminated because it was the close of the school year. Four groups terminated when they could not attract the necessary numbers of riders by the required time. Table 6-3 summarizes pool terminations. In each case the group had been notified for the preceding two months that service would cease if pool vacancies were not filled.

There has been only one change in van drivers since the project began in February 1978. The driver and five poolers left one vanpool to form a carpool. A new driver was found, new poolers joined, and the pool continued. The stability of the vanpool drivers is impressive. To date, there have been 32 primary drivers for the 30 pools. One driver dropped to join a carpool, as noted above, and one driver switched to a rider due to an illness.

Only 19 vanpoolers or 5 percent of those who have vanpooled at any time, terminated for personal reasons.* Of these eight had either changed jobs or residency, six switched to a carpool and five were no longer interested for one reason or another. The majority of poolers terminating, 97 or 28 percent of all poolers, did so when their vanpool group terminated.

TABLE 6-3.

TERMINATED VANPOOLS

<u>Origin & Destination</u>	<u>Average Round-Trip Mileage</u>	<u>Number Months in Operation</u>	<u>Reason for Termination</u>
Market #1			Unable to replace five original riders transferring to another work site.
Petaluma to San Francisco	75	3	
San Rafael to San Francisco	40	3	Unable to achieve full ridership.
Market #2			
Berkeley to Sonoma State College	90	4	End of school year, no desire to continue.
Santa Rosa to Sonoma State College	30	3	Unable to achieve full ridership.
Napa/Sonoma to Marin	67	2	Unable to achieve full ridership.

*Through June 30, 1978

6.4 MODE CHOICE - MARKET PENETRATION

The market for this project is all commuters who live in either Marin or Sonoma County and travel across the Golden Gate Bridge to work - Market #1, and all intra-North Bay commuters - Market #2. Though Market #2 is comprised of three times as many commuters as Market #1, the vanpool market share for #2 can be expected to be significantly less due to the shorter distance of trips, shorter commute times, and reduced access to direct bus routes.

To form our analysis of market penetration we first need to understand the amount of commutation to be analyzed. An illustration of the mode split of commuters in Market #1 follows. The commuter counts were taken by the bridge district during the 6-10 AM period Monday, May 15, 1978; vanpools are included within the carpool category. A carpool is defined by GGBHTD as a vehicle with three or more occupants. Carpools do not pay the \$1.00 per round trip bridge toll.

<u>Total No. Commuters</u>	<u>Public Transit</u>	<u>Public Transit Plus Carpool</u>	<u>Auto (1,2 pass.)</u>
40,382	26.6%	40.6%	59.4%

Thus, within Market #1 we observe that 40 percent of all commute trips are made by transit or paratransit. Project vanpools carried .5 percent of the commuters, as of May 15, 1978.

Table 6-4 illustrates, for both Market #1 and #2, the absolute number of commuters and vanpools, given varying market shares. The table cites the number of vans that would be operating within each market for three cases: Case #1, the current share; Case #2, the share projected (as of June 1978) when the project terminates in June 1979; and Case #3, the market share given a tenfold increase of the current market share. For each case the vehicle occupancy is assumed to be ten.

TABLE 6-4.

VANPOOL MARKET SHARE

Case:	Market #1 South Across Bay (40,000 commuters)*			Market #2 Intra-North Bay (120,000 commuters)**		
	1	2	3	1	2	3
Market Share	.5%	1.4%	5%	.1%	.2%	1%
Vanpools	20	57	200	10	28	100
Commuters	190	570	2000	95	280	1000

-
- Case #1. The current market share for the Golden Gate project.
- #2. The projected market share if project objectives are met before project termination. The numbers noted assume the continuation of the two-thirds to one-third split between Markets #1 and #2.
- #3. These numbers assume a ten fold expansion of the current market share, and are included to provide the reader with a sense of the number of vans that would be necessary to make a sizeable difference in vanpool market share.

*Market #1 commuters based on May 1978 GGBHTD traffic count.

**Market #2 commuters based on 1977 data, see page 45.

6.5 VANPOOLER DEMOGRAPHICS

To further analyze the demand for the project service - who are the users, and why does vanpooling appeal to them - this section will:

1. Review general commute requirements and resources for persons in the Golden Gate travel corridor (Highway #101),
2. Compare the socioeconomic characteristics of the vanpoolers to the general commuter,
3. Note differences between Market #1 and #2 vanpoolers, and,
4. Draw a profile of the demonstration vanpooler.

6.5.1 Golden Gate Travel Corridor

Many suburban communities have developed adjacent to Highway #101, the major traffic corridor in Marin and Sonoma Counties. The corridor represents a disincentive to the private auto in that:

1. There is a daily bridge toll of \$1.00 for Market #1 (south across bridge) commuters,
2. There is severe and growing congestion along major portions of the corridor as well as across the bridge, and
3. Some commuters must pay for parking in the San Francisco CBD.

6.5.2 Vanpoolers Versus the General Commuter

Comparing the socioeconomic characteristics of the vanpoolers to those of the general commuter in Marin and Sonoma Counties, we observe some differences. The vanpoolers' previous mode was more often transit (50 versus 5 percent), and they also owned more automobiles (100 versus 93 percent). The vanpoolers tend to have more years of education (58 versus 19 percent experienced 16 years or more of school) and a larger number fall within the professional/managerial (61 versus 33 percent) category and fewer in the labor/other (4 versus 19 percent) category.

The differences in education levels or work categories most probably reflect the types of jobs available in the San Francisco CBD, in comparison to the greater diversity of jobs and skills required in the entire two-county area. Differences in previous mode reflect transit availability prior to vanpooling.

6.5.3 Differences Between Market #1 and #2 Vanpoolers

Vanpoolers in Market #1 (south across bridge) differ from those in Market #2 (Intra-North Bay) in that they have better access to direct transit routes (no transfer), were heavier transit users prior to pooling (65 versus 1 percent) and have longer and lengthier commute trips. Commuters to jobs in San Francisco have good access to direct express transit as compared to the transit available for the more diverse work trip patterns of residents in the two-county area--Market #2. Income levels are comparable. There are slightly more male vanpoolers (67 versus 54 percent) from Market #1, and they are better educated (62 versus 46 percent have completed 16 years of education or more).

6.5.4 Profile of the Vanpooler

Golden Gate vanpoolers commute long distances (58 percent 35-50 miles one-way, 22 percent more than 50 miles one-way), have regular work schedules (61 percent never work overtime, 68 percent never travel as part of work), and are steady employees with two or more years on the job (75 percent). The majority of poolers (65 percent) do not need their car during working hours. Just less than one-half (44 percent) work for employers with 1000 or more employees.

The vanpoolers are over 30 years old (70 percent), married (78 percent), and almost two-thirds are male. Fifty-five percent classify themselves as professionals, 16 percent as managers, and 14 percent as clerical. The poolers are representative of all education levels and 85 percent have annual salaries of \$15,000 or higher.

As a group the vanpoolers are drivers (97 percent have a driver's license), automobile owners (33 percent own 1, 51 percent are from households owning 2 cars, and 16 percent own 3), and have access to a car (82 percent).

Slightly over half the poolers (55 percent) live 7 or more blocks from a Golden Gate bus stop, and 66 percent claimed a transfer would be necessary to complete their commute trip by bus. Prior to vanpooling they spent a mean of 64 minutes for a one-way trip.

The prior modes of the vanpoolers were 50 percent private auto and 50 percent public transit (49 percent bus, 1 percent ferry).^{*} This may appear to be a somewhat unusual statistic. However, it is not surprising when one considers the prevalence of the long distance commuter whose only alternative to the auto had been the bus. Vanpools offer door-to-door type service, a guaranteed seat and fares that are competitive with or less than bus fares. (Table 5-1.)

Of the auto drivers, 50 percent made no stops on the way to work, 70 percent used company parking facilities, and 82 percent parked at no cost.

Our conclusions are that the project vanpools are attractive to white collar workers travelling long distances and interested in ridesharing as a faster commute mode than public transit. The socioeconomic characteristics of the vanpoolers closely resemble those of the Marin County residents (more than Sonoma County) - well educated, good wage earners, professional/managerial or clerical, and married.

^{*}Even with this diversion of riders to vanpools bus patronage has increased: Golden Gate Transit buses run at capacity during the peak hours.

7. PRODUCTIVITY, ECONOMICS & COST EFFECTIVENESS

This chapter assesses productivity, economics and cost effectiveness of vanpooling at the interim stage. The assessment is intended to answer some of the questions of policy makers who may be considering the implementation of a vanpool program in their jurisdiction. Readers are cautioned, however, that the demonstration project has been in operation for only 9 months, and therefore the data presented and conclusions reached are of an interim nature and subject to change as the project matures.

7.1 VANPOOL PRODUCTIVITY

Productivity is a measurement of output, such as passenger trips, compared to input, such as vehicle trips. Table 7-1 lists productivity as experienced by vanpools and buses and compares them with estimates for single occupant autos and carpools. (Casual riders, 0.1% for luxury vans and 1.2% for deluxe vans, are included in these figures.)

As expected, vanpool productivity falls between the productivity of autos and buses for all measures except for passenger miles per seat mile. This measure could be defined as the portion of capacity that is used. Not surprisingly, carpools rate quite high in this measurement. The relatively low rating of buses is due to the inclusion of a high proportion of deadhead miles and the high number of seats. If the measurement were passenger miles per revenue (in service) seat miles, the ratio for buses would rise to about .75 while all others would remain the same. The modest productivity rating of vanpools reflects the unused capacity in the vans resulting from low membership in some pools and the fact that not all members travel daily. It is anticipated that this measure of vanpool productivity will improve as the project matures.

TABLE 7-1.

PRODUCTIVITY MEASURES BY MODE*

<u>Measure</u>	<u>Single Occupant Auto</u>	<u>Carpool</u>	<u>Luxury Van</u>	<u>Deluxe Van</u>	<u>Bus</u>
Passenger trips per vehicle trip	1	3.6	7.86	7.96	36.5
Passengers trips per vehicle mile	0.03	0.09	0.18	0.20	0.92
Passenger miles per gallon of fuel	16.0	46.8	77.2	78.9	109
Passenger miles per vehicle mile	1.0	3.6	7.5	7.7	21.5
Passenger miles per seat mile	0.27	0.75	0.75	0.70	.48

*Assumptions used for Table 7-1

1. Single occupant autos have an average of 3.7 seats and get 16 miles per gallon on their average one-way trip of 35 miles.
2. Carpools average 3.6 passengers in 4.8 seats and get 13 miles per gallon on their average one-way trip of 40 miles.
3. Data used for buses is total peak period figures for the month of April, 1978.
4. Data used for vanpools is actual project data October, 1977 - June, 1978. Capacity of deluxe vans is assumed to be 11.

7.2 VANPOOL ECONOMICS AND THE PUBLIC SUBSIDY OF VANPOOLS

Vanpooling is conceived as a commute mode with a higher vehicle productivity than carpools and with lower costs than traditional public transit. This latter aspect is primarily achieved by using one of the travelers as the driver (with

the incentive of free commute transportation) rather than hiring drivers as employees.

Table 7-2 breaks down the total non-administrative cost of one typical passenger trip into several major categories, and compares the dollar cost (and percentage) of the bus trip to the vanpool trip. Bus costs are derived from the budget of the Bridge District's Bus Transit Division (adjusted budget approved in September 1977) for fiscal year 1977/78.

The comparisons between bus and van demonstrate that vanpools have far lower driver and maintenance costs, but that they have higher costs for insurance, fuel and depreciation. These higher vanpool costs are due in part to smaller fleet size, lower fuel productivity and the nature of the vehicles. For this example, there is an overall cost savings - excluding administrative costs - of \$1.90 per passenger trip by the vanpool mode.

A full cost comparison between bus operations and vanpool program costs would, of course, include administrative costs. Such a comparison would allow assessment of the level of public subsidy for each transit mode; that is, if we know administrative, fixed and operating costs as well as revenues we could estimate the subsidy or public cost of bus operations compared to vanpool sponsorship. The success of the transition element of the vanpool program - how many vanpools are actually implemented through project actions - will greatly impact this analysis of public subsidy.

At this interim stage, available data suggest that the public subsidy of a passenger trip by Golden Gate Transit is \$1.66, and the public subsidy of a passenger trip by a project van is \$1.94. (These figures are for a 40 mile one-way commute trip.)

TABLE 7-2.

BUS AND VANPOOL COSTS PER PASSENGER TRIP*

Category of Cost	Dollar Costs		Percent of Total Costs	
	Bus	Vanpool	Bus	Vanpool
Labor (Driver)	\$1.93	-0-**	64.9	-0-**
Fuel	.14	.37	4.8	30.8
Tires	.03	.05	1.0	4.5
Maintenance	.54	.16	18.3	13.2
Misc. Operating Expenses	.15	-0-	5.2	-0-
Insurance	.09	.34	3.1	28.8
Depreciation	.08	.25 ***	2.7	21.3
Parking	-0-	.02	-0-	1.4
	2.97	1.19	100.0	100.0

*No administrative costs are included. Costs are computed for the average vanpool passenger trip of 39.7 miles, typical for a project vanpool, but considerably longer than the average passenger trip by bus. Vehicle occupancy is calculated at 10 for the van and 45 (seats) for the bus.

**Although no direct costs are associated with a vanpool driver, about 10 percent of the fare paid by vanpool riders subsidizes the drivers' share of costs.

***These monies are, in part, allocations to reserve funds that are currently running surplus because the vans are new.

The logic used to reach these figures follows:

Bus Transit

Cost per passenger trip	\$2.97
Administrative cost of 12% ¹	<u>.36</u>
	\$3.33
Farebox recovery 50%	-1.66
Subsidy per passenger trip	\$1.66

Vanpool

Fixed and operating costs covered by farebox	
Administrative cost (monthly project budget ÷ person trips in May 1978, \$19,400 ÷ 10,014)	\$1.94

There are a variety of factors or conditions that may cause the subsidy per passenger trip by vanpool to fall, but by far the most critical factor will be the success of the transition program. If the transition program is successful on a continuing basis, then there is every reason to believe that the subsidy per passenger trip by vanpool will fall well below the subsidy per passenger trip by bus for commutes of a comparable distance.

Table 7-3 shows cost ratios for both vanpooling and Golden Gate bus transit that, again, do not include administrative costs. For the two most important ratios, cost per passenger trip and per passenger mile, vanpooling compares quite well (33 percent and 60 percent lower respectively) with the same ratios for bus transit.

¹ Institute for Defense Analyses, Economic Characteristics of the Urban Public Transportation Industry, prepared for U.S. DOT, February 1972.

TABLE 7-3.

COMPARISON OF COST RATIOS BY MODE*

<u>Cost Per</u>	<u>Vanpool</u>	<u>Bus Transit</u>
Passenger trip	\$1.19	\$1.77
Passenger mile	0.03	0.075
Seat trip	0.90	1.46
Seat mile	0.022	0.036
Vehicle mile	0.225	1.63

*Vanpool figures are based on actual project data, October 1977 through June, 1978 and deluxe vans are assumed to have 11 seats. Bus transit figures are based on approved adjusted budget for FY 1977/78 and the bus transit peak period, transbay (commute) data from "Deficit Report" for April, 1978.

Note that the cost per passenger trip by bus is for the average bus trip. While the cost per trip in Table 7-2 is for a trip that is longer than the average.

Given the importance and high visibility of government spending today, a crucial policy question to be addressed by this demonstration project is: "What is the cost-effectiveness of (government) subsidy money for vanpools versus other modes of transportation?" The data collected on this subject are insufficient to date, but a complete analysis will be included in the final report.

8. PROJECT IMPACTS

This evaluation was designed to carefully analyze the demonstration's impacts in numerous areas. The interim report highlights early findings on the impacts on users. These have been discussed in detail in Sections 5.3 and 5.4. Because the market share for project vanpools is quite low, the impacts listed below will be analyzed at the close of the project and included in the final report.

1. Impacts On Other Commuters
2. Impacts On Employers: parking requirements, costs benefits and disbenefits
3. Impacts On the Bridge District: mode shifts, traffic congestion, transit patronage, project induced changes in "club bus" supply, financial impact, subsidy by mode
4. Impacts On Other Local Rideshare Programs.

Participants have cited cost savings as the most important reason for joining the project. In addition, former transit riders are spending less time while former auto users report spending more time commuting to and from work.

The section of this report on price demonstrates that vanpoolers are spending, on the average, less for monthly vanpool fares than they would have for a month of driving (alone), carpooling or busing. (See Section 5.3.)

Also, cost savings and potential cost savings have been cited in the areas of auto ownership and insurance.

The supplementary survey asked participants if vanpooling had had an effect on their household's auto ownership. Twenty percent responded positively as follows:

Deferred replacing	8%
Avoided buying	7%
Sold a vehicle	1%
Will probably sell	4%

Survey findings indicated that 35 percent of those surveyed had checked with insurance companies regarding automobile insurance coverage; but, only 15 percent were able to reduce their insurance -- 67 percent from this group of 165 saved less than \$50 and 33 percent saved \$50 or more per year.

Though it is not yet possible to present a total picture of cost savings (no available data on individual commute cost savings and miscellaneous reductions), it can be concluded that most vanpoolers are saving money over their prior commute mode.

The conclusion reached in Section 5.4, an analysis of travel time, was that vanpoolers who had previously commuted by transit were saving an average of 9 minutes on their trip to work. On the other hand, former automobile commuters, whether they were driving alone, with one other passenger or in a carpool, were spending an average of 11 minutes more on their vanpool trip to work.

In summary, vanpooling has impacted the cost of commuting and travel time for the vanpooler.

1. Former transit commuters are saving money and time.
2. Commuters of single- and double-occupant vehicles are saving more money at the expense of a longer commute.
3. Most former carpools are spending less money but more time on their commute.

9. SUMMARY AND CONCLUSIONS

9.1 PROJECT OBJECTIVES

9.1.1 Primary Objectives

The Golden Gate Vanpool Demonstration Project began with two primary objectives:

1. To test the feasibility of a public sector agency's facilitating the formation of vanpools, and
2. To test the feasibility of transitioning vanpoolers from project vans into privately operated vans.

The project has clearly met the first objective. The District has proven to be an effective vanpool facilitator by virtue of motivation, adequate funding and resources, and institutional credibility.

The Board of Director's motivation for actively pursuing a vanpool project is to relieve the severe traffic congestion that is predicted to increase in the Golden Gate traffic corridor. They perceive ridesharing as an option for controlling congestion and delaying major capital investments in transit vehicles or increased bridge capacity.

This strong motivation, along with the fact that the District is a single agency operating several transit modes within the traffic corridor, provides a strong supportive institutional environment for the vanpool project. Also, the possibility of internecine warfare among competing transit modes is nullified by having one agency controlling all modes based on the relative benefits that each provides.

The project, when compared to other similar programs, has been adequately funded through UMTA demonstration monies as well as by virtue of being an integral part of the Golden Gate Bridge, Highway and Transit District. The District has been in a position to provide staff support in the form of legal, marketing and administrative assistance and physical space in existing facilities. These resources have allowed project staff to concentrate on program objectives and day-to-day operations.

Further, the District provides the vanpool program with instant credibility. The credibility of a rideshare facilitator may prove to be in the long run a critical element in third party programs. Public questions of 'who are they, will they default on the program's promises, will they disappear and leave me stranded?', are less likely to be asked of an organization with the history and status of Golden Gate. The District's established reputation may also make it easier for the project to attract potential poolers directly as opposed to a third party program where the cooperation of major employers is critical in soliciting employees' participation.

At the time of this report, the project has not really addressed the second objective of transitioning poolers into non-project vans after a period of six months. In May 1978, the Board of Directors authorized the extension of the six month introductory period to 12 months. This change in policy reflected the project staff's experience with public skepticism of 'just' a six month support period guarantee. It also reflected the many exceptions to program policies or procedures the project experienced in bringing any one vanpool to full continuing ridership.

9.1.2 Site Specific Objectives

In addition to the foregoing objectives, the Golden Gate District set itself several site specific objectives:

To decrease vehicle demand on bridge lane capacity while not requiring further expansion of the deficit financed District Transit service,

To determine the future potential of vanpools in the corridor, and

To establish the best role for the District to assume in the transition program.

The first of these objectives has so far been poorly met. Overall, 50 percent of the vanpoolers were former bus transit

riders and one-third of all vanpoolers were in Market #2, i.e., the intra-county commute market that does not go south across the bridge. Because a high proportion of vanpoolers were former transit riders, the number of private automobiles taken off the bridge lanes is much lower than if all poolers were former automobile drivers.

An evaluation of how well the project meets the other two noted site objectives will be completed as part of the final report. The future potential of vanpool given the local conditions - long commute distances and heavy marketing promotions - will be assessed via a survey to be implemented prior to the project's termination.

It is assumed that at the time of project termination, the District will have selected its ongoing role in transitioning vanpools.

9.1.3 SMD Objectives

The major SMD objective addressed by the project is that of testing methods to increase area coverage and to improve vehicle productivity. How well the project meets these objectives can be better evaluated at the close of the demonstration. Evaluation at this interim stage indicates that the vanpool program extends coverage well beyond that of the transit system. This is true especially in Market #2 where origins and destinations are both poorly served by transit (Table 5-1).

9.1.4 Compared to Other SMD Programs

The Golden Gate Demonstration is one of five experiments in ridesharing programs funded under the UMTA Service Methods and Demonstration (SMD) program. In time, UMTA will compare program characteristics and the success of each program in meeting SMD

objectives. For those familiar with the SMD projects the following list attempts to clarify where Golden Gate differs from other demonstrations and, when possible, why.

Direct Marketing - The success of marketing directly to potential vanpoolers through bridge handouts and media announcements has resulted in minimal efforts to solicit employer cooperation to sponsor vanpooling.

Seeding Program - This is the only project with the expressed goal of transitioning vanpool groups to non-project vans.

Customized Vehicles - This is the only project where vans are equipped with custom reclining seats. The demand for the luxury and higher priced van exceeds that for the 11-passenger bench van in this market area.

Driver Incentives - The project does not allow for excess fares that are identified as driver incentives. The lack of this particular driver incentive apparently has not made the program less attractive to potential drivers.

9.2 PROJECT FINDINGS

9.2.1 Planning

The planning period of the project took slightly over two years. As with similar programs, the planning period - resource allocation, staffing, Board approval, vehicle acquisition and procurement of insurance - took longer than anticipated. The critical events were negotiating a 13(c) agreement (7 months) and securing an affordable insurance coverage with provisions (rates) that favored this project's style of operations.

The period between grant application and final grant approval followed the 13(c) agreement and consumed one year (see Table 9-1).

TABLE 9-1.
PROJECT MILESTONES

1976			1977					
APRIL	JULY	AUGUST	FEBRUARY	MARCH	APRIL	JULY	AUGUST	OCTOBER
Grant Application		Revised Grant Application		Grant Approval				
	13(c) Negotiations Start		13(c) Agreement		Vans Ordered		Vans Arrived	
						Insurance Obtained		First Van Operational

9.2.2 Implementation

The Board of Director's early expectations for rapid van-pool implementation proved unrealistic. However, within five months one-half of the available vans were operating and at the close of eight months 30 vans were operating - a growth rate greater than in other similar programs.

The time required to 'sell' the fleet of project vans is assessed as reasonable. Based upon the project's experience, we predict that any third party type rideshare program, given modest marketing efforts and of comparable fleet size, will require six to nine months to achieve full implementation.

Also, the project underwent a fair amount of modification to original program policies. These reflected the need to implement vanpools as expediently as possible and the day-to-day operating experiences. For example, to allow a budding vanpool sufficient time to acquire the needed three or four riders, the project twice reduced the number of minimum poolers required (in the second and fifth month of operations). The requirement for reserving a seat with a \$25 deposit was deemed unproductive and time consuming, and was dropped.

9.2.3 Level of Service

The vanpool coverage extends beyond that of existing transit systems. The prime example of this is in Market #2 where only one of the ten vanpool routes is also served by transit.

We can only conjecture about any impact of the manual matching process, as opposed to computer-aided matching, on the project's growth. On one hand, the relative slowness of manual matching has meant that staff has not had sufficient time to design a transition program as scheduled. On the other hand, through manual matching the staff has become thoroughly acquainted with individual drivers and groups and has resolved a number of minor procedural issues before establishing a transition program. The final report will focus on any differences observed between the two matching methods as they impact project activities.

We evaluate both the reliability and stability of the drivers over an eight month period and for a total of 115 vanpool operating months as providing a very good level of service. The reliability of the vans - two breakdowns in 250,000 project miles - has been quite high. In addition, the accident rate has been low with three minor accidents or one per 630,000 passenger miles.

9.2.4 Demand for Service

The demand for vanpool service in the Golden Gate corridor is by white collar workers travelling long distances (80 mile round trip average) and switching to vanpooling as a faster commute mode (50 percent were former transit riders). These long distance commuters prefer the more luxurious and higher priced customized van.

The demand for service exists in two markets: Market #1, south across the bridge and Market #2, intra-north bay county. Market #1 commuters have longer and lengthier commutes and a majority (65 percent versus one percent) were former transit riders.

9.2.5 Impact on Users

In summary, the Golden Gate project has proven to be safe, reliable and economically attractive to vanpoolers.

Former transit commuters are saving time and money by vanpooling. Former carpoolers are spending less money but more time by vanpooling.

Findings regarding travel times are that former transit riders save nine minutes on their commute and former carpoolers add close to 11 minutes.

In addition, some 15 percent of the vanpoolers are saving money through reduced automobile insurance premiums.

9.2.6 Marketing Strategies

The most cost effective marketing strategy has been the bridge toll booth handouts (\$11 per resulting application). The least cost effective strategy was the series of community meetings (\$710 per resulting application).

Communicating the concept and benefits of vanpooling to potential users in their residential communities appeared to be a viable vanpool marketing strategy. (In fact, there is continuing interest in following this marketing approach as a means of dealing with an individual commuter's identified fear of ridesharing with strangers.²) However, the five project-sponsored community meetings elicited a very poor turnout.

It is probably true that the Golden Gate project's control over a toll bridge and a major traffic corridor influences the success of the various marketing strategies tried. The project has direct access to all commuters in Market #1 as they travel along their daily commute: there is, perhaps, less need to market the vanpool program to potential users through their place of employment or to solicit the support of local governments or

²Hartgen, D., Ridesharing Behavior: Recent Studies. New York: Department of Transportation, November 1977.

business groups in promoting vanpools. The project does plan future employer promotions, but thus far such promotions have been primarily in response to employer or a group of employees' requests.

9.3 TRANSFERABILITY

Before discussing the transferability of these preliminary findings, it should be noted that the Golden Gate corridor is, in many ways, an ideal environment for the development of vanpooling.

1. There is a single congested corridor with an exclusive high occupancy vehicle (HOV) lane leading into a major employment center via a toll bridge.
2. The vanpool facilitator controls the toll booth and grants free bridge passage to 3-person or larger carpools - and vanpools.
3. There are 40,000 persons who commute daily to San Francisco via the toll bridge. This commute market is predicted to grow at a rate of 1,000-2,000 commuters per year.

With this understanding about the idealness of this demonstration setting, the following discussion presents project findings that constitute lessons learned in the sphere of vanpooling. For the final report, these interim lessons learned will be translated into program characteristics that are transferable directly or under certain conditions to other urban settings.

The findings from the Golden Gate vanpool project add to a growing body of knowledge about vanpool programs and demonstrate that items which once acted as constraints to program implementation -- PUC regulations, 13(c) agreements, insurance coverage -- are now negotiable issues. Though no two vanpool projects are likely to possess the same resources or characteristics, any one project is very likely to experience a degree of chaos and modification to program design during the first few months of

operations. Project flexibility is necessary for the creative resolution of day-to-day crises.

One perhaps unexpected finding of this project is that even in market areas where fast, reliable transit is available, vanpools have appeal. Not surprising is the finding that naturally existing disincentives to the single occupant automobile -- severe traffic congestion, priced parking, HOV lanes -- serve as strong incentives to vanpooling. Even less surprising is the finding that it is the long distance commuter who is most attracted to vanpooling.

One project characteristic that should be noted when discussing the issue of transferability is the quality of the project staff. The Golden Gate project staff is motivated, enthusiastic, and competent; qualities evaluated as critical to a vanpool project's success. For this project, the quality of the staff's interactions with vanpool drivers during the frequent and informal telephone conversations has produced an effective feedback mechanism for monitoring project progress.

The special characteristics of the Golden Gate commute market have perhaps influenced the effectiveness of the marketing strategies implemented; and, generally, any project's marketing strategies are best when tailored to the local market. However, it is worth noting that it has been the most obvious and least costly strategies that have been the most effective for Golden Gate.

To assess the transferability of the Golden Gate project, it is essential to review key factors that characterize a specific market area. The following table, included in an evaluation of a Federal Energy Administration (FEA) Vanpool Demonstration program implemented in five market areas³, is useful as a guide in assessing market factors that contributed to the success of the Golden Gate project.

³Dorosin, E., et.al., Evaluation of the FEA Vanpool Marketing and Implementation Program, prepared by SRI, International for FEA, November 1977, HCP/J60438-01.

TABLE 9-2.

SUMMARY OF ENVIRONS CHARACTERISTICS

	REGULATORY SETTING	INSTITUTIONAL SETTING	TRANSIT HISTORY	MODAL SPLIT	TRAFFIC CONDITIONS AND FACILITIES	ENVIRONMENTAL PROBLEMS	POPULATION AND LAND USE	POLITICAL SETTING	SUMMARY OF KEY ISSUES
PENINSULA	Favorable (+)	MTO covers 9 counties Transportation leadership diffused (-)	Minimal Two growing bus districts	SC: 1% bus transit SM: 2% bus, 3% rail	Congestion along major corridors parking free and plentiful (-)	Increase in air pollution and urban sprawl apparent (0)	Growth Suburban development predominates	Minimal political support for ride share since 1974 (-)	Little disincentive to private auto institutions complete for leadership
CHICAGO	Workers Compensation an inhibitor Special vanpool licensing (-)	Jurisdictional overlap Multi transit operators (-)	Well established rail and bus systems	CBO: 74% rail and bus Suburbs: 19% rail and bus	Traffic congestion Limited parking (+)	None highly visible (0)	Growth Suburban communities well defined CBD	Strong support for public transit systems State ride share program funded, 1977 (-)	Regulatory constraints Transit systems favored for long commutes
LONG ISLAND	Favorable (+)	No discernible problems (0)	Well established rail system Upgrading bus system	Nassau: 17% rail and bus Suffolk: 1% bus	Few discernible problems Good traffic flow (0)	Urbanization of limited agricultural lands (0)	Residential growth Suburban development	Neutral - (0)	Small company size decide single employer sponsored program
NEW ORLEANS/ BATON ROUGE	Favorable (+)	Favorable SECP to fund ride share program (+)	Good bus service Lower level of bus service, B.R.	New Orleans: 7% transit Baton Rouge: .008% bus	Porting shortage In CBDs (+)	None highly visible (0)	Stable Medium-size, SHSA with 2 CBDs	Governor publically endorsed ride share program (+)	Positive political and institutional environs
CONNECTICUT	Favorable (+)	Decentralized institutions, compatible (+)	Numerous small local systems Commuter rail to NYC	5% bus transit	Parking limited in CBDs and at select employ sites (+)	Severe air quality problem (0)	Moderate growth Mix of CBDs and suburban	Governor publicly endorsing ride share program (+)	Positive public and private emphasis on ride sharing
GOLDEN GATE CORRIDOR	Favorable (+)	A single agency responsible for all transit modes (+)	Fleet of 250 buses, 1 club bus system, 1 ferries, district promotes carpooling	77% bus, ferry transit; 1% carpool	Corridor congestion at peak hours; HOV lanes; reverse lanes on bridge Congestion and limited parking in S.F. CBD Toll for slough occupant areas (+)	Strong public opposition to expanding bridge capacity via 2nd deck addition (+)	Growth Suburban communities well defined CBDs	MTO, CALTRANS, GORRHO fund ride share programs (+)	Strong district motivation to increase vehicle occupancy via ride sharing and other strategies

*This characteristic has not been ranked. However, it is an effective indicator with other factors.

(+) Favorable (0) Neutral (-) Not favorable to van pooling

POLICY AND PROCEDURES

APPENDIX A

GLOSSARY OF TERMS

BART

Bay Area Rapid Transit.

CALTRANS

California Department of Transportation.

CLUB BUS

A subscription commuter bus service supplied by private bus operators with a paid, professional driver. The Golden Gate District subsidizes club buses in its operating area.

DEMONSTRATION VAN

One of thirty-five ten- and twelve-passenger vans owned by the project for the purpose of introducing vanpool service to groups of interested commuters.

DEMONSTRATION VANPOOL

An operating vanpool during the period of time when a project demonstration van is being used.

DEMONSTRATION VANPOOLER

A vanpooler in an introductory demonstration vanpool.

INTRODUCTORY VAN

Same as Demonstration Van.

INTRODUCTORY VANPOOL

Same as Demonstration Vanpool.

INTRODUCTORY VANPOOLER

Same as Demonstration Vanpooler.

MUNI

San Francisco Municipal Railway

PRIVATE VAN

A van used by a private vanpool.

PRIVATE VANPOOL

An operating vanpool that never has used a project demonstration van.

PRIVATE VANPOOLER

A vanpooler who never has been in a project demonstration van.

RIDES

Rides for the Bay Area—a CALTRANS-sponsored and -operated carpool promotional program.

RIDES, INC.

Rides for the Bay Area, Inc.—a San Francisco Bay Area vanpool promotional organization. The model used is a brokerage concept with use of private leasing companies servicing the demand developed through employer promotions.

SEEDED VAN

A vehicle used by a vanpool group after it has discontinued using a project demonstration van.

SEEDED VANPOOL

An operating vanpool after it has been transferred from a project demonstration van to a non-project van.

SEEDED VANPOOLER

A vanpooler who originally was in a demonstration vanpool but is now in a seeded vanpool.

STATUS CODE

This code refers to the status that a particular commuter has with the vanpool program. The codes are listed in Appendix I. They range from "type of applicant" to "terminated for x reason."

VANPOOL

A group of six or more commuters who ride together to work. One commuter acts as the driver, usually on a permanent basis. A vanpool is considered to exist as long as vanpool service occurs between similar residential and destination clusters. The driver, riders, and van may all change over a period of time.

VANPOOL TERMINATION

The discontinuation of vanpool service from one area to another.

VANPOOLER TERMINATION (GOLDEN GATE PROJECT)

A discontinuation of interest in vanpooling in the Golden Gate corridor for an indefinite period of time. Such a person may move and choose to be a vanpooler in another area.

APPENDIX B
VANPOOL APPLICATION FORMS

Golden Gate Van Pool Box 9000, Presidio Station · San Francisco, CA 94129
 VAN POOL Office is located at 1011 Andersen Drive, San Rafael, CA 94902.

Please print the following information using only one letter per box. Abbreviate where necessary. Be specific in home and work address. Example: Is it a Street (St.), Road (Rd.), Avenue (Ave.), etc? Provide apartment number where applicable. Forms without phone numbers cannot be processed.

HOME INFORMATION	Last Name		First Name		Initial																							
	Street Number		Street Name		Apt. No.																							
	City				Zip Code																							
	Area Code	Home Phone	County of Residence		San Francisco																							
WORK INFORMATION	Company Name																											
	Street Number		Street Name		Rm., Flr., Site #																							
	City				Zip Code																							
	Area Code	Work Phone	Extension																									
	Cross street nearest your work address																											
NORMAL WORK SCHEDULE	EXAMPLE → <table style="display: inline-table; border: 1px solid black; text-align: center;"> <tr> <td>Hour</td><td>Minutes</td><td></td><td></td><td>Hour</td><td>Minutes</td><td></td><td></td> </tr> <tr> <td>0</td><td>8</td><td><input checked="" type="checkbox"/></td><td>AM</td><td>4</td><td>30</td><td><input checked="" type="checkbox"/></td><td>PM</td> </tr> </table>					Hour	Minutes			Hour	Minutes			0	8	<input checked="" type="checkbox"/>	AM	4	30	<input checked="" type="checkbox"/>	PM							
	Hour	Minutes			Hour	Minutes																						
	0	8	<input checked="" type="checkbox"/>	AM	4	30	<input checked="" type="checkbox"/>	PM																				
Begin Work <table style="display: inline-table; border: 1px solid black; text-align: center;"> <tr><td>Hour</td><td>Minutes</td><td></td><td></td></tr> <tr><td></td><td></td><td><input type="checkbox"/></td><td>AM</td></tr> <tr><td></td><td></td><td><input type="checkbox"/></td><td>PM</td></tr> </table> Leave Work <table style="display: inline-table; border: 1px solid black; text-align: center;"> <tr><td>Hour</td><td>Minutes</td><td></td><td></td></tr> <tr><td></td><td></td><td><input type="checkbox"/></td><td>AM</td></tr> <tr><td></td><td></td><td><input type="checkbox"/></td><td>PM</td></tr> </table>					Hour	Minutes					<input type="checkbox"/>	AM			<input type="checkbox"/>	PM	Hour	Minutes					<input type="checkbox"/>	AM			<input type="checkbox"/>	PM
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Can you arrange a 30 minute adjustment to your working hours? Yes <input type="checkbox"/> No <input type="checkbox"/>																												
COMMUTE INFORMATION	I normally get to work by <table style="display: inline-table; text-align: center;"> <tr> <td>Drive Alone</td><td>Car Pool</td><td>Drop Off</td><td>GGT Bus</td><td>Ferry</td><td>Club Bus</td><td>Other</td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> </tr> </table>					Drive Alone	Car Pool	Drop Off	GGT Bus	Ferry	Club Bus	Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
	Drive Alone	Car Pool	Drop Off	GGT Bus	Ferry	Club Bus	Other																					
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																					
	In a Van Pool would you prefer to be: <table style="display: inline-table; text-align: center;"> <tr> <td>Coordinator/Driver</td><td>Back-up Driver</td><td>Passenger</td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> </tr> </table>					Coordinator/Driver	Back-up Driver	Passenger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																	
	Coordinator/Driver	Back-up Driver	Passenger																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
If a convenient Club Bus were available to you, would you try it? Yes <input type="checkbox"/> No <input type="checkbox"/>																												
Would you like to receive a free Car Pool match list? Yes <input type="checkbox"/> No <input type="checkbox"/>																												
In a Car Pool would you prefer to: <table style="display: inline-table; text-align: center;"> <tr> <td>Drive</td><td>Ride</td><td>Either</td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> </tr> </table>					Drive	Ride	Either	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																		
Drive	Ride	Either																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										

Completion of this form does not obligate you to join a Van Pool. This information is confidential and will be treated accordingly.

FOR OFFICIAL USE ONLY

(Origin)
(Destination)
(Date Received)
(Date Placed)
(ID Number)
(Pool Number)
(Fare/Mo)
(Contact Code)
(Status Code)

FIGURE B-1.
 BASIC GOLDEN GATE APPLICATION FORM

NAME: _____

Occupation: _____ How many years with this employer? _____

BIRTHDATE:
MO DA YR

CALIF. DRIVER LIC. #

Have you held your California Drivers License for five consecutive years? YES NO

Do you hold a valid vehicle operators license from a state other than California? YES NO

How many years have you been driving?

Are you experienced in auto repair? YES NO

What type of auto repair experience do you have? _____

Indicate the type of parking space available at home:

GARAGE CARPORT DRIVEWAY OTHER

Number of dependents in household of driving age? _____

DURING THE LAST FIVE (5) YEARS:

Has your auto insurance been: Cancelled Declined Renewal Refused

Has your driver's license been suspended or revoked? YES NO

Have you been involved in an auto accident while operating any auto, private or other, which resulted in damage to any property, including your own; bodily injury or death?

YES NO

If yes, give: DATE OF ACCIDENT BODILY INJURY: YES NO
MO DA YR

DATE OF ACCIDENT BODILY INJURY: YES NO

PROPERTY DAMAGE AMOUNT: YOURS \$ _____ OTHERS \$ _____

DESCRIPTION OF ACCIDENT: _____

Have you been convicted of a moving traffic violation? YES NO

If yes, give: Date of conviction(s):
MO DA YR MO DA YR

Violation Description(s): _____

Name of Supervisor at Work: _____ Phone:

Area Code	Work	Phone	Extension
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

May we check with your supervisor concerning your punctuality: YES NO

How much non-commute travel does your job require each month?

None 1-3 days 3-5 days over 5 days

Do you have any physical conditions/impairments, including a heart condition, diabetes, epilepsy, etc.?

YES NO If yes, explain: _____

SIGNATURE _____ DATE _____

FOR OFFICE USE ONLY: Qualified Unqualified Inactive _____

FIGURE B-2.

SUPPLEMENTARY GOLDEN GATE APPLICATION FOR DRIVERS

I'M INTERESTED.

Please print the following information using only one letter per box. Abbreviate where necessary. Be specific in home and work address. Example: Is it a Street (St.), Road (Rd.), Avenue (Ave.), etc? Provide apartment number where applicable. Forms without phone numbers cannot be processed

HOME INFORMATION	Last Name <input type="text"/>		First Name <input type="text"/>		Initial <input type="text"/>																					
	Street Number <input type="text"/>		Street Name <input type="text"/>		Apt. No. <input type="text"/>																					
	City <input type="text"/>				Zip Code <input type="text"/>																					
	Area Code <input type="text"/>	Home Phone <input type="text"/>	County of Residence: <input type="text"/>		Choices: 1-Marin 5-San Mateo 9-Contra Costa 2-Sonoma 6-Santa Clara 10-Santa Cruz 3-Napa 7-Solano 11-Other 4-San Francisco 8-Alameda																					
	Cross street nearest your home address <input type="text"/>																									
WORK INFORMATION	Company Name <input type="text"/>																									
	Street Number <input type="text"/>		Street Name <input type="text"/>		Rm., Flr., Site # <input type="text"/>																					
	City <input type="text"/>				Zip Code <input type="text"/>																					
	Area Code <input type="text"/>	Work Phone <input type="text"/>	Extension <input type="text"/>																							
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	Hour	Minutes		Hour	Minutes																					
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Can you arrange up to a 30 minute adjustment in your working hours? Yes <input type="checkbox"/> No <input type="checkbox"/>																										
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	Drive Alone	Car Pool	Drop Off	Public Transit	Ferry	Club Bus	Other																			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																			
	1	2	3	4	5	6	7																			
	In a Van Pool would you prefer to be a <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td>Driver/Coordinator</td><td>Back up Driver</td><td>Passenger</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>1</td><td>2</td><td>3</td></tr> </table>					Driver/Coordinator	Back up Driver	Passenger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	2	3												
Driver/Coordinator	Back up Driver	Passenger																								
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Drive	Ride	Either																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																								
1	2	3																								

Completion of this does not obligate you to join a Van Pool. This information is confidential and will be treated accordingly.

FOR OFFICIAL USE ONLY

<input type="text"/>

FIGURE B-3.
JOINT GOLDEN GATE & RIDES, INC. APPLICATION FORM
B-4

APPENDIX C
VANPOOL POLICIES AND PROCEDURES

A. Selection of Area and Route

In order to optimize the realization of the project objectives, the following guidelines will be used by Golden Gate Van Pool in area and route selections:

1. Adequate concentration of interested riders.
2. Destination points must be within District service area.
3. Priority will be given to service routes which cross the Golden Gate Bridge.
4. Routes will be based on time and mileage efficiency.
5. In general, vans will stop at the nearest intersection to a rider's home; in inclement weather, the van will stop at the rider's house.

B. Selection of Driver Coordinators and Back Up Drivers

1. Driver Coordinators and Back Up Drivers will be largely responsible for the success of the program, and their selection will be based on the following criteria:
 - a. Geographical location in relation to passengers and potential passengers.
 - b. Off-street facilities for keeping van at night and on week-ends.
 - c. Work attendance record and amount of business travel that would interfere with daily driving.
 - d. Attitude about the program and long-range interest.
 - e. Driving record and physical condition.
 - f. Over 25 years of age (determined by insurance carrier)
2. Driver/Coordinators and Back Up Drivers will enter into a Cooperative Agreement specifying both the District's and Driver Coordinator/Back Up Driver's responsibilities as well as the specific rules governing vehicle operation.

C. Selection of Riders

The Golden Gate Van Pool Staff will initially identify riders for each pool group and furnish such names to the Driver Coordinator. Additional names will be forwarded periodically to the Driver Coordinator as potential substitutes for riders who drop out. Selection of substitute riders will be made by the Driver Coordinator and his/her use of the following guidelines will be monitored by the Program Coordinator:

1. Geographical proximity to the Driver Coordinator and or route selected.
2. Where distances from Driver Coordinator's residence are equal, selection will be made by earliest date of application.

3. It is recognized that some latitude must be available to the Driver Coordinator for contingency situations where absolute adherence to the selection criteria would work a hardship on an individual. Such cases will be reviewed by the Program Coordinator prior to commitment.

D. Passenger Conduct

1. Passengers will be given a copy of the Van Pool Policies and Procedures and are expected to comply with the Rules and Regulations contained therein.
2. Whenever possible, internal issues or problems should be discussed and resolved with the Driver Coordinator and/or Back Up Driver.
3. Unresolved complaints may be discussed with the Golden Gate Bridge Van Pool Staff at 457-3110.

E. Pool Group Size

1. The District offers two types of vans; a 12 passenger deluxe bench seat van and a 10 passenger luxury van, with individual reclining seats. To maximize the project objectives, the van should be operated at full capacity.
2. The minimum number of riders (excluding the Driver Coordinator) required to start and maintain a Van Pool will be 10 in the 12 passenger van and 8 in the 10 passenger van, unless a group determines to operate with fewer than the minimum and agrees to bear the increased individual rider cost resulting therefrom.
3. In the event that ridership falls and remains below the currently agreed minimum for 30 days and efforts to replace lost riders are unsuccessful in the absence of an arrangement as specified in E-2 above, the District can recall the van and reassign it to another Pool group.
4. The Driver Coordinator shall notify the District by the 26th of each month the number of riders committed to ride for the following month.

F. Rider Replacement

1. Riders are encouraged to submit names of potential riders to the Driver Coordinator so that the agreed upon ridership level can be maintained.
2. At times such as vacations or other absences, when registered paying passengers will not be using their seats, they may sub-let their seat temporarily to another rider with the approval of the Driver Coordinator.

G. Seating and Service

1. Seating shall be assigned by the Driver Coordinator/Back Up Driver with consideration for:
 - a. height of rider and leg room needed;
 - b. priority of sign-ups;
 - c. priority of boarding and debarkation;
 - d. request of rider.
2. Waiting period at each stop will be approximately three (3) minutes maximum (to be mutually agreed on by the Van Pool members).

H. Fares

The fare schedule will be determined from a combination of fixed costs (depreciation, special equipment and insurance) and variable or operating costs (fuel, maintenance, tires, etc.), which will vary with mileage. Precise mileages and fares for each Van Pool will be developed by the District with the Driver Coordinator.

1. Fares will be computed using the following factors:
 - a. Operating cost at 11¢ per mile (including fuel, tune-up, maintenance, oil and tires).
 - b. Insurance cost - based on actual rates quoted plus a monthly charge to cover deductibility exposure for collision and comprehensive coverage.
 - c. Parking cost - the actual cost for each individual vehicle.
 - d. Depreciation cost - based on a complete straight line write-off at six years or 120,000, whichever accumulates more rapidly.
Mileage rates charged for depreciation are:
 1. 6.5¢ per mile (12 passenger deluxe van)
 2. 7.75¢ per mile (10 passenger luxury van)
2. Fares will be periodically reviewed by the District and may be adjusted at any time. Prior notice will be given of rate changes.
3. The fare is based on an average of 21 operating days per month and will remain the same from month to month.

H. Fares - continued

4. The fare schedule assumes the following seven (7) Holidays when the van will not operate: New Year's Day, Washington's Birthday, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.
5. Payment of the monthly fare will be by check or money order, made payable to the Golden Gate Bridge, Highway and Transportation District and delivered to the Driver Coordinator/Back Up Driver by the 28th day of the month immediately preceding usage.
6. A penalty of \$5.00 will be assessed to fare payments received after the 28th day of the prior month. If payment is not received by the first of the month, the seat will be considered vacant for reassignment purposes.
7. A pro-rated monthly fare will be required when passengers begin riding in a van.

I. Personal Use of Vehicles

1. The Driver Coordinator/Back Up Driver will have the privilege of personal use of the van for a combined maximum of 350 miles per month at a mileage rate which will be established by the District. The District reserves the sole right to determine if the personal use of the vehicle is proper.
2. The carrying of passengers, other members of the Van Pool and immediate members of the Driver Coordinator's/Back Up Driver's household is permissible. However, regular use of the van to carry organized groups is not permitted.

J. Termination

1. The District reserves the right to revoke use of the van at any time for any reason.
2. Driver Coordinators and Back Up Drivers may terminate their agreements by the end of any calendar month by giving 30 days prior written notice.
3. The Cooperative Agreement (between the Driver Coordinator/Back Up Driver) may be terminated by the District at any time.
4. General guidelines for the termination of the Cooperative Agreement will be:
 - a. More than two moving traffic violations - within a six (6) months period.
 - b. Abuse of vehicle.
 - c. Failure to be punctual.
 - d. Failure to comply with the terms of the agreement.

5. Action will also be taken by the District

- a. In cases of gross negligence
- b. For failure to comply with the spirit and intent of the program
- c. Loss of the Driver Coordinator and/or the Back Up Driver with no suitable replacement.

6. Riders may terminate participation in the Van Pool Program at any time. However, compliance with Section H-2 of these Rules and Regulations is required.

K. Prohibitions

1. NO SMOKING is permitted during the commute operation of the vans --- unless the group agrees unanimously to allow it (Driver Coordinator shall make a private inquiry of riders).
2. No alcoholic beverages may be consumed or carried in open containers on the van.

L. Service and Maintenance

1. Mechanical problems, lubrication, tire replacement, tune-ups and other periodic servicing will be performed by District designated service facilities in accordance with the Service and Maintenance Handbook supplied to each Driver Coordinator/Back Up Driver.
2. The District will attempt to provide a substitute van during any period that the pool vehicle is out of service; however, the District cannot guarantee that a substitute van will be provided at all times.

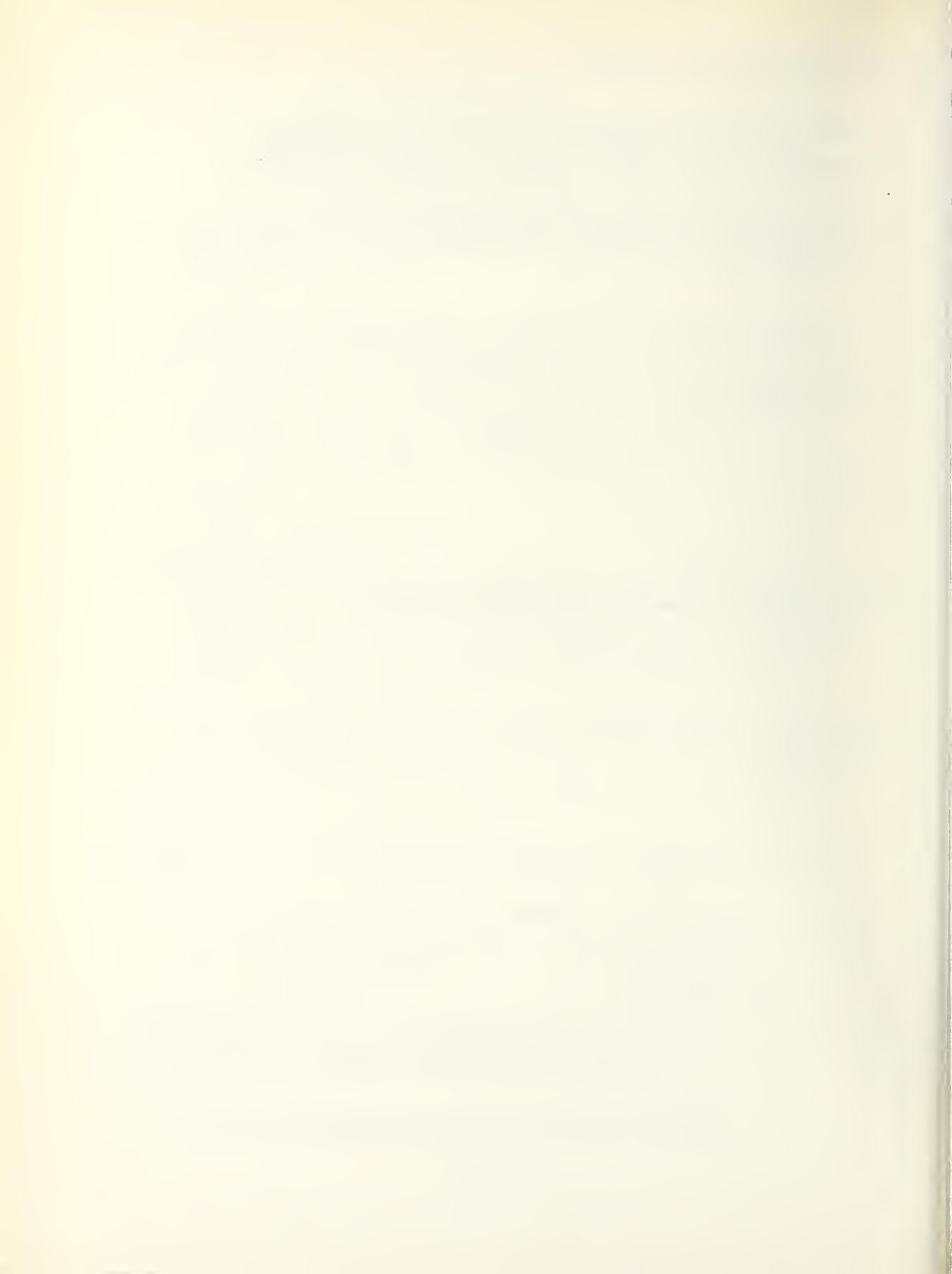
M. Insurance

Each van will carry the following amounts of insurance protection for its riders.

Combined Single Limit Liability	\$1,000,000
Medical	\$ 2,000 per person
Uninsured Motorist	\$15/30,000
Comprehensive	\$50 deductible
Collison	\$250 deductible

The premium for this coverage will be paid by the District and its actual cost, included as a component in the fare calculation.

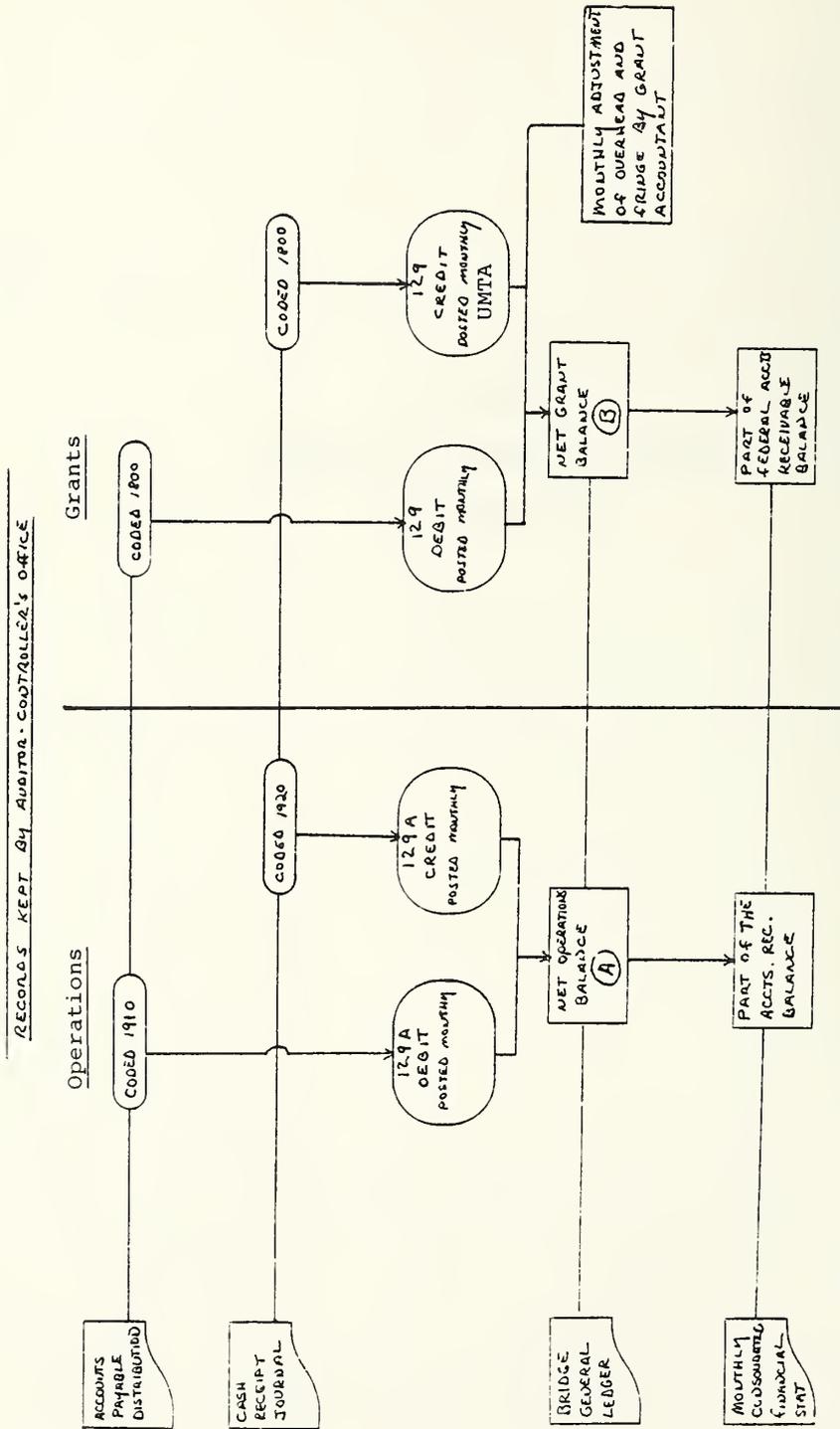
The District also maintains separate additional coverage.



APPENDIX D
PROJECT ACCOUNTING SYSTEM
AND REPORTS

FIGURE D-1.

FLOW CHART OF ALL FINANCIAL RECORDS



(A) MONTHLY THIS AMOUNT IS RECORDED TO UNAPPORT PROJECT COST CONTROL (OPERATIONAL) BY SOLD SHELLS
 (B) MONTHLY THIS AMOUNT IS RECORDED TO UNAPPORT FEDERAL GRANT PROJECT COST CONTROL BY GDB FUDGE

FIGURE D-2
FLOW CHART OF FINANCIAL RECORDS FOR PROJECT ADMINISTRATION

RECORDS KEPT BY FEDERAL GRANT ACCOUNT

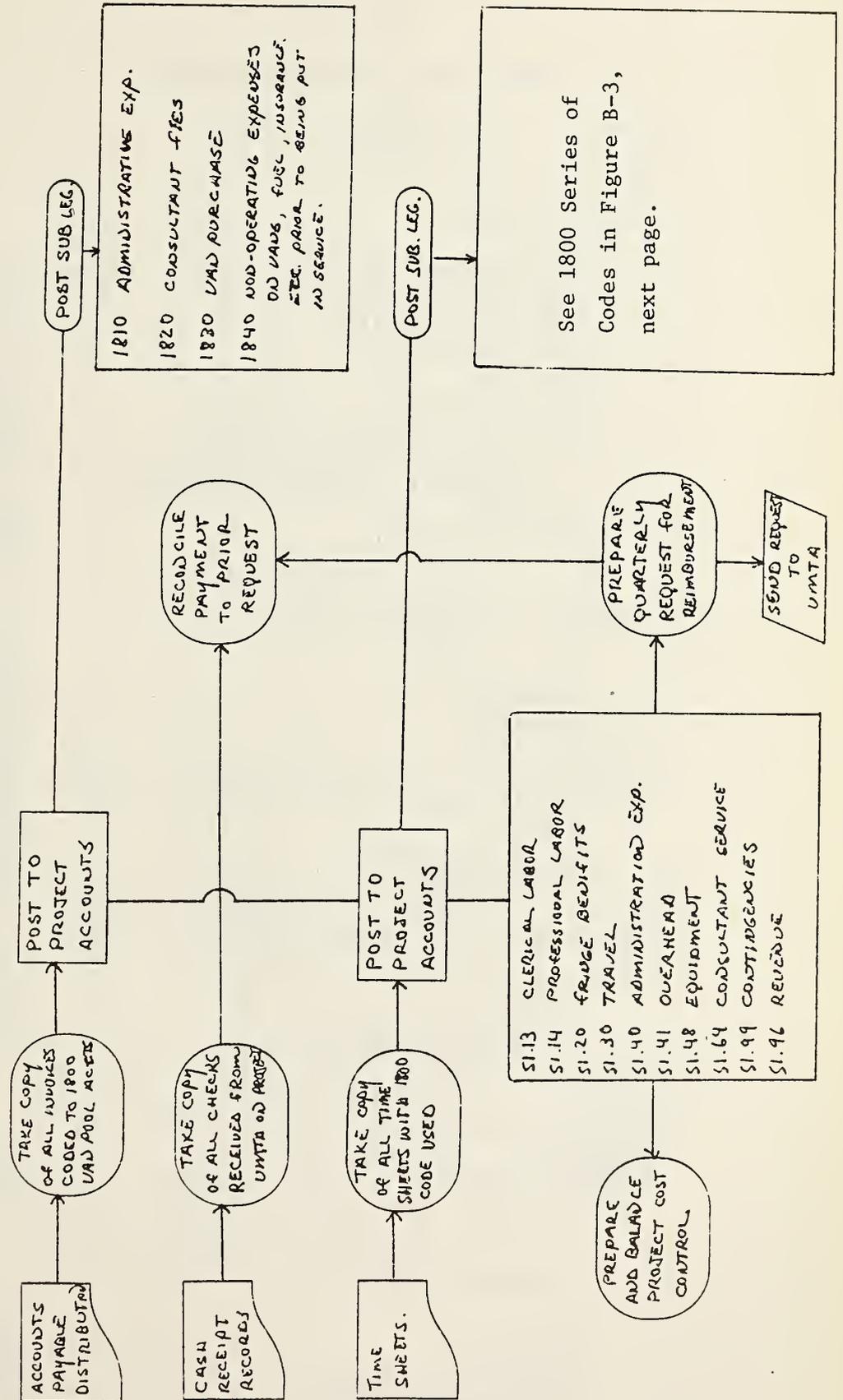


TABLE D-1.

PROJECT ADMINISTRATION ACCOUNTS

(1800 Series Codes)

Staff Services

Project Administration	1800
Fleet Administration	1801
Promotion-Marketing	1802
Pool Organization	1803
Training	1804
Data Collection	1805
Transition Services (Seeding)	1806
Preparation Charges (underseal, striping, equipment)	1807
Overhead	1808
Labor, Clerical	1809

Administrative Costs

Transportation	1810
Supplies	1811
Materials	1812
Printing	1813
Phone	1814
Mailing	1815
Travel	1816
Other Expenses	1817
Marketing Expenses	1818

Professional Services

Legal	1820
Marketing	1821
Fleet Administration	1822

Van Acquisition

Van Purchase	1830
Equipment	1831

Fleet Handling Costs

Fuel	1840
Servicing	1841
Repairs & Maintenance	1842
Insurance	1843



APPENDIX E
PROJECT EXPENDITURES BY TYPE

TABLE E-1. GOLDEN GATE PROJECT EXPENDITURES BY TYPE

#	DESCRIPTION	BUDGET	Req. #4 (1978)			PTD* TOTAL	Req. #5 (1978)			PTD* TOTAL
			JAN	FEB	MAR		APR	MAY	JUNE	
STAFF SERVICES										
1800	Project Admin.		\$2,326	\$2,525	\$2,057	\$38,531	\$2,730	\$2,762	\$1,752	\$45,776
1801	Fleet Admin.		329	698	732	4,507	2,337	1,087	771	8,702
1802	Marketing		2,552	1,341	1,018	12,073	1,471	2,658	2,833	19,034
1803	Pool Organization		1,627	1,860	1,887	11,183	1,373	982	1,046	14,585
1804	Training	\$188,820	85	72	16	216	444	-	59	719
1805	Data Collection		2,377	2,190	1,801	9,406	1,564	1,172	1,943	14,085
1806	Seeding Services		-	-	285	285	-	-	-	285
1807	Veh. Preparation		458	122	132	5,295	264	29	27	5,616
1808	Overhead		1,518	1,072	1,001	10,093	1,155	1,059	954	13,261
1809	Labor-Clerical	\$30,804	2,428	1,966	2,028	19,433	1,368	1,901	1,108	23,811
ADMINISTRATIVE COSTS										
1810	Local Transp.	3,500	403	366	411	2,856	379	549	425	4,209
1811	Supplies		160	3	179	841	224	31	111	1,208
1812	Materials-Equip.		34	29	828	3,480	31	-	-	3,511
1813	Printing	5,000**	-	-	-	78	-	-	80	158
1814	Phone		85	4	370	790	192	202	133	1,317
1815	Mailing		-	-	-	115	-	-	-	115
1816	Travel	1,500	52	786	300	1,437	-	477	-	1,914
1817	Other Expenses		547	115	71	2,822	306	19	29	3,176
1818	Marketing		-	4,115	1,431	6,643	6,430	1,205	22,988	37,266
1819	Data Collection		-	-	-	-	-	-	297	297
PROFESSIONAL FEES										
1820	Legal Fees	7,500	-	-	620	620	-	-	-	620
1821	Marketing Fees	74,000	10,971	-	1,723	35,114	871	159	<22,720>	13,424
1822	Fleet Admin.	5,000	-	-	-	-	-	-	-	-
EQUIPMENT PURCHASE										
1830	Van Purchase	450,000	-	-	-	-	-	-	-	-
1831	Equipment		-	-	-	-	-	-	-	-
FLEET HANDLING										
1840	Fuel		86	112	101	799	-	15	-	815
1841	Servicing	3,000	-	-	122	414	157	-	2	572
1842	Repairs		-	-	150	192	-	-	-	192
1843	Insurance	6,300	-	-	-	-	5,000	4,255	185	9,440
CONTINGENCY REVENUE										
						40,000				
						<131,328>				
	TOTAL		29,960	17,317	17,321	487,681	26,298	18,566	12,021	544,566

*Project to date total

TABLE E-1. GOLDEN GATE PROJECT EXPENDITURES BY TYPE (cont.)

#	DESCRIPTION	BUDGET	Req. #2 (1977)			PTD* SUB TOTAL			Req. #3 (1977)			SUB TOTAL			PTD* TOTAL
			JULY	AUG	SEPT	SUB TOTAL	OCT	NOV	DEC	TOTAL	NOV	DEC	TOTAL		
STAFF SERVICES															
1800	Project Admin.		\$1,996	\$2,273	\$3,081	\$7,350	\$23,679	\$2,431	\$2,919	\$2,592	\$7,942	\$31,621			
1801	Fleet Admin.		61	125	1,272	1,458	1,458	962	120	208	1,290	2,748			
1802	Marketing		648	449	1,216	2,313	3,245	1,390	1,006	1,522	3,918	7,163			
1803	Pool Organization		54	16	333	403	403	1,910	1,523	1,972	5,405	5,808			
1804	Training	\$188,820						43			43	43			
1805	Data Collection			53	1,149	1,202	1,202	352	801	684	1,837	3,039			
1806	Seeding Services			550	1,033	1,583	1,583					1,583			
1807	Veh. Preparation		368	432	1,039	1,839	3,621	964	919	998	2,881	6,502			
1808	Overhead	30,804	924	851	2,301	4,076	4,626	2,555	2,822	3,007	8,384	13,011			
ADMINISTRATIVE COSTS															
1810	Local Transp.	3,500		24	543	567	567	387	347	376	1,110	1,677			
1811	Supplies					618	618	253	203	44	500	500			
1812	Materials-Equip.		618		78	78	825	303		1,459	1,762	2,587			
1813	Printing	5,000**										78			
1814	Phone		60		5	60	60	231	1	39	271	331			
1815	Mailing					5	5	111			111	116			
1816	Travel	1,500	120			120	120	96		83	179	299			
1817	Other Expenses				710	710	710	287	528	564	1,379	2,089			
1818	Marketing	**	1,015	2,101	1,012	4,128	4,128	3,941	8	64	3,869	259			
PROFESSIONAL FEES															
1820	Legal Fees	7,500													
1821	Marketing Fees	74,000	1,833	406	1,283	3,522	3,522	6,724	10,686	1,487	18,897	22,419			
1822	Fleet Admin.	5,000													
EQUIPMENT PURCHASE															
1830	Van Purchase	450,000		148,175	168,014	316,189	317,748					317,748			
1831	Equipment				2,015	2,015	2,066	644			644	2,710			
FLEET HANDLING															
1840	Fuel			222	253	475	475	18		8	26	501			
1841	Servicing	3,000			2	2	2	184		105	289	42			
1842	Repairs									42	42	42			
1843	Insurance	6,300													
CONTINGENCY REVENUE															
		40,000													
		<131,328>													
TOTAL		684,096	7,697	155,677	185,339	348,713	370,124	15,904	21,883	15,254	53,041	423,165			

*Project To Date Total

TABLE E-1. GOLDEN GATE PROJECT EXPENDITURES BY TYPE (cont.)

#	DESCRIPTION	BUDGET	(1976)			(1977)			SUB TOTAL			
			OCT	NOV	DEC	JAN	FEB	MAR		APR	MAY	JUN
	STAFF SERVICES		\$ 707	\$ 1,919	\$ 2,041	\$ 2,174	\$ 2,155	\$ 2,609	\$ 2,111	\$ 1,595	\$ 1,018	\$ 16,329
1800	Project Admin.											-
1801	Fleet Admin.											932
1802	Marketing									102	830	-
1803	Pool Organization	\$ 188,820										-
1804	Training											-
1805	Data Collection											-
1806	Seeding Services											-
1807	Veh. Preparation											-
1808	Overhead		71	192	204	217	216	261	211	170	240	1,782
1809	Labor-Clerical	30,804									551	551
	ADMINISTRATIVE COSTS											-
1810	Local Transp.	3,500										-
1811	Supplies											-
1812	Materials-Equip.										207	207
1813	Printing	5,000**										-
1814	Phone											-
1815	Mailing											-
1816	Travel	1,500										-
1817	Other Expenses											-
1818	Marketing	**										-
	PROFESSIONAL FEES											-
1820	Legal Fees	7,500										-
1821	Marketing Fees	74,000										-
1822	Fleet Admin.	5,000										-
	EQUIPMENT PURCHASE											-
1830	Van Purchase	450,000									1,559	1,559
1831	Equipment									51		51
	FLEET HANDLING											-
1840	Fuel											-
1841	Servicing	3,000										-
1842	Repairs	6,300										-
1843	Insurance											-
	CONTINGENCY	40,000										-
	REVENUE	<131,328>										-
	TOTAL	684,096	778	2,111	2,245	2,391	2,371	2,870	2,322	1,918	4,405	21,411

APPENDIX F
STATUS CODES

MEMO

Golden Gate
To: Van Pool Staff

Date: 9 November 1977

From: Peter FitzGerald

Reference: DOT-TSC-1081-31

Subject: Changes in Van Pooler Status, Codes, Reports & Surveys

cc: Jim Poage, TSC

A three digit ride-sharing status code has been developed to serve both implementation and evaluation needs in connection with changes that will occur during the project. Figure I-1 presents the codes. Codes concerning the van pool program are developed as extensively as possible at this point to cover all imaginable cases. As one can see, there are many situations that can occur that require implementation and evaluation activities. Figure I-1 indicates staff reports and van pooler surveys which are to be completed when changes occur. The word "report" is used to indicate an evaluation/management form to be completed by the staff and the word "survey" is used to indicate an evaluation/management form to be completed by the van pooler. Copies of these forms are enclosed.

A new status code will be assigned whenever:

1. An initial application is made
2. An applicant is placed in an introductory van
3. An applicant is seeded from an introductory van pool to a private van pool
4. An applicant is placed in a private van pool without an introductory van pool
5. A van pooler goes on an inactive status for some period of time
6. A van pooler is to be placed in another van pool while still active in a van pool

7. A van pooler is to be placed in another van pool while on an inactive status
8. A van pooler is dropped by the program or terminates his or her interest in van pools
9. A van pool driver changes to a van pool rider in the same van pool
10. A van pool rider becomes a driver in the same van pool

The "working copy" of the person's application (used for matching purposes) is to be updated anytime that a change occurs. This is done by crossing out the changed information and writing in the new information. This includes a new status code (as well as new address information, etc). The "working copy" of the application form will provide the present, most up-to-date information on any person. It will be kept in one of the files designed for the "working copy" -- see Figure I-2, Part I. These files are organized for implementation purposes, and, in effect, act as an activity center for every person registered with the program.

In addition to updating information on the "working copy" of the application any time there is a change of status, a Change of Status Report should be processed. Section A of this report records the basic change of status. Other sections are filled out as indicated on the form and in Figure T-1. An "x" across from any two digit code (e.g., 05□) applies to all three digit subcodes within that group.

In two cases (C. Temporary Inactivity and D. To Be Placed in a New Van), the report is to be completed through Part One of that section and then attached to the "working copy" of the application which will be moved from one file to another. With the next step in the process, Part Two will be completed and then the Report will be filed in the Completed Change of Status

Reports File. In the other cases, the report will be completed in one step and filed.

The Completed Change of Status Reports File will be organized by the ten types of status codes as outlined in the list on the first page of this memo. The first subfile, then, will be made up of all the original applications (which represent a change of status and substitute for a Change of Status Report). The second subfile will be made up of Change of Status Reports indicating a placement in an introductory van (02□), etc. The reports should be filed sequentially by ID number within these subfiles.

In a few cases, particular changes in status require survey activity involving the van pooler -- again as indicated on the Report and in Figure I-1. These surveys should be sent to the van pooler with the initial name and ID information completed and with a self-addressed and stamped return envelope. The administration of these surveys will be monitored via a Survey Completion Log Book, yet to be designed with the project staff.

An additional Van Pool Vacancy Report will be generated every time that a person will be leaving a van pool for a temporary time or wishes to be placed in another van pool. This form, again, has both implementation and evaluation purposes. It will be filed in a manner as indicated in Figure I-2, Part II for the sake of the matching process. The form has two parts, the first to be completed at the time that the potential vacancy is reported and the second to be completed when a decision is made as what to do with the vacancy.

There are situations in which changes may occur very quickly with one change seemingly overshadowing another. It will be

important to separate out these changes and to report on them separately. Examples would be:

- o An applicant is placed in a van pool at the same time as the application is submitted. In this case, a Change of Status Report should be filled out - indicating a placement (e.g. from 015 to 022: Change from an "applicant for van pool or club bus" to "placed in a Golden Gate Introductory van as a Back-up Driver").
- o A van pooler is switched from one van pool to another at the same time that the switch was requested or decided on by the staff. In this case a Change of Status Report should be completed for the change from "placed van pooler" to "van pooler to be placed in a new van pool" and another Change of Status Report should be completed for the change from "van pooler to be placed" to "placed van pooler." In addition, a Van Pool Vacancy Report should be processed - regardless of the outcome or the amount of time involved.

In such cases it will be very easy to fill out the Change of Status Report - with there being no time lag involved.

Presumably, there will be situations that have not been adequately anticipated. A notebook should be kept by the staff noting any problems or inadequacies on the part of the system of codes or report formats. The system can then be reviewed and improvements made on a systematic basis.

TABLE F-1.

GOLDEN GATE VANPOOL PROGRAM, RIDESHARING STATUS CODES

Code	Status
01 <input type="checkbox"/>	= Initial Applicant
	011 = Vanpool only
	012 = Carpool only
	013 = Club bus only
	014 = Vanpool or carpool
	015 = Vanpool or club bus
	016 = Carpool or club bus
	017 = Vanpool, carpool or club bus
02 <input type="checkbox"/>	= Placed in a Golden Gate Introductory Van
	021 = Driver
	022 = Back-up driver
	023 = Rider
	024 = Driver changes to rider (same vanpool)
	025 = Driver changes to back-up driver (")
03 <input type="checkbox"/>	= Placed in a Private Vanpool - Seeded from an Introductory Van
	031 = Driver
	032 = Back-up driver
	033 = Rider
	034 = Driver changes to rider (same vanpool)
	035 = Driver changes to back-up driver (")
04 <input type="checkbox"/>	= Placed in Private Vanpool Without Use of an Introductory Van
	041 = Driver
	042 = Back-up driver
	043 = Rider
	044 = Driver changes to rider (same vanpool)
	045 = Driver changes to back-up driver (")
05 <input type="checkbox"/>	= Temporarily Inactive Vanpooler
	051 = Vacation
	052 = Temporary unemployment
	053 = Unemployment - unknown future employment
	054 = Work related travel
	055 = Illness
	056 = Other

TABLE F-1.(cont.)

GOLDEN GATE VANPOOL PROGRAM, RIDESHARING STATUS CODES

Code	Status
06 <input type="checkbox"/>	= Active Vanpooler To Be Placed in Another Vanpool
	060 = Change of hours only
	061 = Change of residence or work location
	062 = Back-up driver or rider wants to be driver in another vanpool
	063 = Driver wants to be rider - has to switch to find driver for vanpool
	064 = Not satisfied with driver safety or reliability
	065 = Change requested due to personal incompatibility with present vanpoolers (including policies)
	066 = Better match desired for less travel time
	067 = Less cost desired (i.e., more vanpoolers)
	068 = Less vanpoolers desired - more comfort
	069 = Vanpool disbanding
07 <input type="checkbox"/>	= Inactive Vanpooler to Be Placed in a Vanpool
	070 = Change of hours only
	071 = Change of residence or work location
	072 = Back-up driver or rider wants to be driver in another vanpool
	073 = Person coming from inactive status - no change in commute needs
	074 = Not satisfied with driver safety, reliability or upkeep of the van
	075 = Change requested due to personal incompatibility with present vanpoolers (including policies)
	076 = Better match desired for less travel time
	077 = Less cost desired (i.e., more vanpoolers)
	078 = Less vanpoolers desired - more comfort
	079 = Vanpool disbanding
08 <input type="checkbox"/>	= Vanpooler Drop-Out
	081 = Death or retirement
	082 = Change of residence or work location out of S.F. Bay area
	083 = Change of residence or work location out of G.G. served area but in S.F. Bay
	084 = Driver or rider dropped by project - no new placement offered
	085 = Vanpooler desires carpool only
	086 = Vanpooler desires club bus only

TABLE F-1. (cont.)

GOLDEN GATE VANPOOL PROGRAM, RIDESHARING STATUS CODES

Code	Status
	087 = Vanpooler desires carpool or club bus only
	088 = Original application could not be satisfied - <u>applicant</u> terminates interest in ridesharing (only for applicants)
	089 = Vanpooler drops-out - not interested in ridesharing matching
09 <input type="checkbox"/>	= <i>Code not Designated at Present (Left Blank for Expansion of Vanpool Codes if Needed)</i>
10 <input type="checkbox"/>	= Placed in a Carpool
11 <input type="checkbox"/>	= Placed in a Club Bus
12 <input type="checkbox"/>	= Carpooler Desires Information on Other Carpools
<i>etc.</i>	= <i>Other Ridesharing Codes</i>

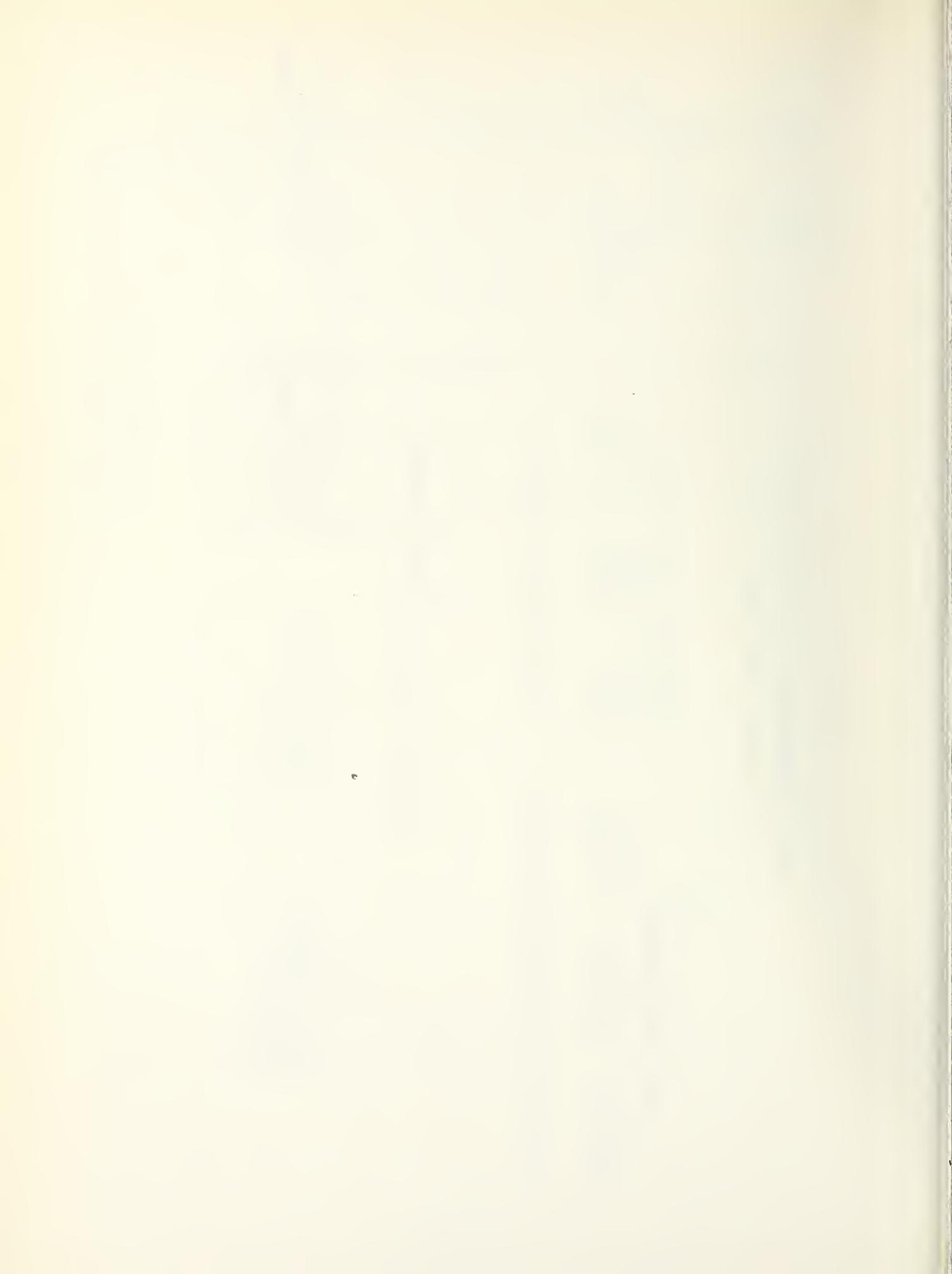
FIGURE F-1.

FILES FOR WORKING COPY OF APPLICATION
(manual matching)

(1)	Inactive- Waiting	(2)	Van Pool Matching To Be Matched	(3)	Forming a Group	(4)	Matched & Van Pooling Intro Vans	(5)	Seeded Vans	(6)	Private Vans	(7)	Drop-Out from Van Pool Other Ridesharing	(8)	Drop- Out
	(Organized by Origin-Destination)														

II. FILES FOR VAN POOL VACANCY REPORT

(1)	Sublet/Casual Riders Desired; No Permanent Riders	(2)	Prefer Sublet; Permanent if Necessary	(3)	Permanent Rider Desired; Sublet Possible	(4)	Vacancy Absorbed or Filled or Van Pool Disbands
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APPENDIX G

VANPOOL DRIVER COOPERATIVE AGREEMENT

GOLDEN GATE VAN POOL
COOPERATIVE AGREEMENT

THIS AGREEMENT is made between the GOLDEN GATE BRIDGE, HIGHWAY AND TRANSPORTATION DISTRICT ("District") and _____
_____,
("Driver Coordinator/Back Up Driver") and shall be effective as of the date it is signed by the District.

The parties agree as follows:

1. Furnishing of Van

A. The District will provide a ten or twelve passenger van to the Driver Coordinator/ Back Up Driver for use in accordance with this Agreement.

B. The District will attempt to provide a substitute van during any period that the basic van is out of service. The number of spare vans available to the District is limited, however, and District does not guarantee that a substitute van can be provided.

2. Use of Van

A. The Driver Coordinator or when necessary the Back Up Driver, shall operate the van each working day, to and from the place of employment, in accordance with routes and schedules approved by the District. Registered members of the Van Pool shall be picked up and discharged at points designated by the District.

B. The Driver Coordinator/Back Up Driver may operate the van for personal use, during non-working hours and on weekends and holidays up to a maximum of 350 miles during any calendar month, at a mileage rate to be set by the District. The Driver Coordinator/Back Up Driver shall pay the District for such use. Advance notice will be given to drivers concerning any change in personal use rates.

C. The Back Up Driver may, by agreement with the Driver Coordinator, operate the van for personal use during non-working hours and on weekends and holidays. The combined personal use of the van by the Driver Coordinator and Back Up Driver shall not exceed 350 miles during any calendar month. The Back Up Driver shall reimburse the Driver Coordinator, for such use, at the rate established by the District.

3. Duties of the Driver Coordinator/Back Up Driver

In addition to the basic obligation of operating the van described in Section 2(A), the Driver Coordinator shall:

- A. Maintain a valid California Class 3 Driver's License.
- B. With assistance from Van Pool Staff, attempt to maintain the pool membership at the maximum ridership of ten or twelve, depending on the capacity of the van.
- C. Keep the interior and exterior of the van in a neat and clean condition.
- D. Purchase necessary fuel and oil, employing a credit card, if possible.
- E. Arrange for regular service and maintenance in accordance with District's direction.
- F. Report any breakdowns or accidents promptly to District and obtain necessary service or repairs as directed by District.
- G. Provide off-street parking facilities for the van at his or her residence.
- H. Arrange for sufficient back-up drivers to substitute when necessary.
- I. Maintain records regarding members of the Van Pool (name, address, I.D. # and telephone number), passengers carried each day, mileage, and monies collected and expended, in accordance with District directions and periodically submit these to District for review.
- J. Comply with the District's Van Pool Policies and Procedures, a copy of which has been provided to Driver Coordinator/Back Up Driver, and with amendments thereto.

The duties of the Back Up Driver shall be the same as those of the Driver Coordinator.

4. Collection and Disbursement of Funds

The Driver Coordinator or when necessary, the Back Up Driver, shall collect from each member of the Van Pool the approved monthly fare, in advance, and deliver such fares (together with any fare collected from occasional passenger carried during the preceding month) to the District on or before the fourth day of each month. Receipts for fuel, oil and lubrication purchased during the preceding month and a statement of mileage for personal use of the van by the Driver Coordinator and/or Back Up Driver(s) shall also accompany the delivery of monthly fares. The District will periodically bill the Driver Coordinator for all such personal use. It is the responsibility of the Driver Coordinator to obtain reimbursement from the Back Up Driver(s) for their share of the personal use charges.

5. Servicing, Maintenance and Repair Expenses

The District will pay for scheduled servicing and maintenance and for mechanical and body repairs. This work will be done only by those persons designated by the District, and in accordance with Policies and Procedures prescribed in the District's Service Maintenance Handbook, a copy of which will be provided with each van.

6. Insurance

A. The District will obtain the following amounts of insurance coverage through its underwriters for the pool.

Combined Single Limit Liability	\$1,000,000
Medical	\$ 2,000
Uninsured Motorist	\$15/30,000
Comprehensive	\$50 deductible
Collison	\$250 deductible

The premium for this coverage will be paid by the District and its actual cost included as a component in the fare calculation.

B. EMPLOYERS may wish to obtain the insurance required by the District through separate arrangements. In such cases, the specifications of said insurance will be described in an addendum to this agreement.

The insurance so obtained must be satisfactory to the District and a certificate of insurance, evidencing coverage with a 30 day notice of cancellation, must be filed with the District.

C. In either case, the Driver Coordinator/Back Up Driver must be approved by the District's underwriters for operation of the van and agrees to submit to District such information and permit such investigation as to his/her driving record, as may be required. Driver Coordinator/Back Up Driver also agrees to participate in such Driver Training courses as may be required by the District's underwriter.

D. Driver Coordinator/Back Up Driver will pay the collison deductible in case of any and each incident occuring during personal use of the van.

7. Restrictions on Operation of Van

A. It is agreed that the Driver Coordinator shall be the primary driver of the van during the term of this agreement.

Except in emergencies, the van is to be operated only by the Driver Coordinator and Back Up Drivers.

B. No passengers are to be carried to or from the place of employment except members of the Van Pool and occasional passengers approved by the Driver Coordinator who pay the occasional rate prescribed by the District.

C. The van may not be used for hire, or to pull trailers or boats. The van may be driven only on hard-surfaced public streets and highways, surfaced access roads and driveways. The van may not be driven on bridges or roads posted for a maximum load weight of three tons or less.

D. Seats may not be removed from the van at any time. Accessories or additional equipment may not be added or removed without the District's prior approval.

8. Traffic Violations and Accidents

A. The Driver Coordinator/Back Up Driver shall report to the District within 24 hours any citations for violation of the Vehicle Code received by any person operating the van.

B. The Driver Coordinator/Back Up Driver shall report to the District within 24 hours any accident involving the van, in accordance with the District's Van Pool Regulations.

C. The Driver Coordinator/Back Up Driver will report any citations or accidents involving himself or herself while driving any vehicle. Compliance with the Vehicle Code and liability for violations thereof is the sole responsibility of the Driver Coordinator/Back Up Driver.

D. The Driver Coordinator/Back Up Driver shall, thereafter, promptly submit to the District any information requested by the District concerning the citation or accident.

9. Termination

A. The District may immediately terminate this Agreement if, in its judgment, the Driver Coordinator/Back Up Driver is not providing adequate and prompt service to the Van Pool members or if Driver Coordinator/Back Up Driver violates any of the provisions of this agreement.

B. The District may at any time dissolve any Van Pool which is unable to maintain the minimum number of paying members and/or which is operating uneconomically.

C. Either party may terminate this agreement on thirty days written notice to the other party.

D. Upon termination of the agreement or dissolution of the Van Pool, Driver Coordinator/Back Up Driver shall promptly return the van to the District at a location specified by the District.

GOLDEN GATE BRIDGE, HIGHWAY AND
TRANSPORTATION DISTRICT

DRIVER COORDINATOR

BY: _____

Signature

Date: _____

Date: _____

BACK UP DRIVER

Signature

Date: _____

/mr

9/23/77

VAN POOL POLICY ACKNOWLEDGEMENT

The Golden Gate Bridge, Highway and Transportation District will provide a ten or twelve passenger van to the Driver Coordinator/ Back Up Driver. The van will be operated to and from the place of employment in accordance with routes and schedules approved by the District. The District will attempt to provide a substitute van during any period that the basic van is out of service; however, the District cannot guarantee that a substitute van will be provided at all times.

The Passenger recognizes that the Driver Coordinator/Back Up Driver are not District employees and waives any claims against the District for losses arising from intentional misconduct or negligent acts and omissions of the Driver Coordinator/Back Up Driver in the operation of the van.

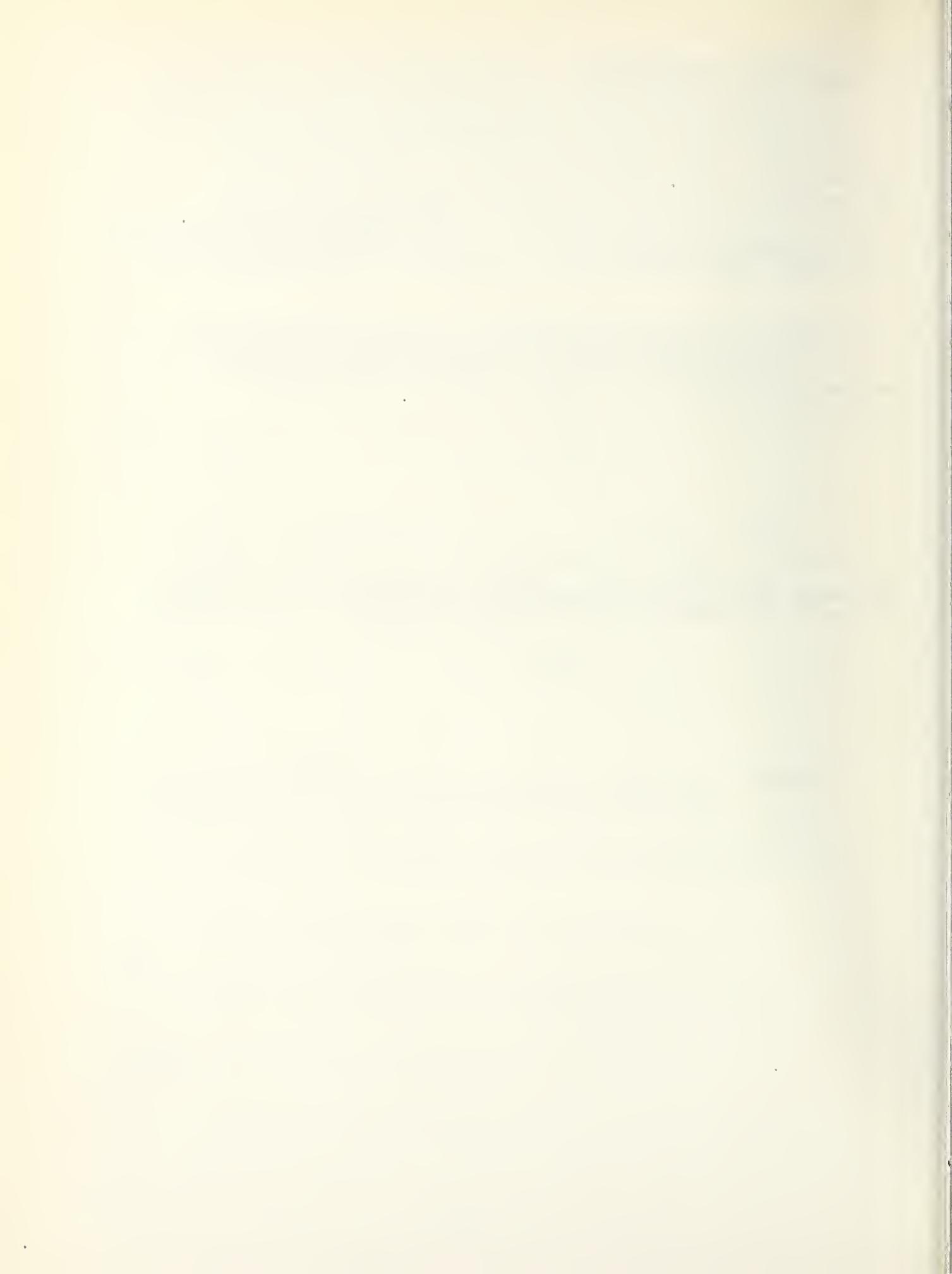
- - - - -

I, _____, have read pages 1 thru 5
(Name)

of the Van Pool Policies and Procedures, understand and agree to abide by them. I have retained a copy for future reference.

Signature: _____ Date: _____

I. D. # _____



APPENDIX H
SERVICE AND MAINTENANCE PROCEDURES



GOLDEN GATE VAN POOL
SERVICE AND MAINTENANCE PROCEDURES

Your responsibility as a driver is to maintain the vehicle in accordance with the manufacturer's instructions and our direction, which may exceed the manufacturer's recommendations. Each van has a standard warranty period of twelve (12) months or 12,000 miles. Also, there is a 90 day period for trim warranty (glass, trim, upholstery, and paint). The information for break-in periods and warranty items are listed in the Operating Instruction & Product Information Manual, placed in your glove compartment. In cases where you think warranty work is required, call the Fleet Administrator.

It is advised that you use a credit card for all purchases relating to gas, oil lubes, minor repairs and car washes. Receipts for charged purchases are to be attached to your Vehicle Operating Expense log at the end of each month. No reimbursement will be made without itemized receipts.

Golden Gate Van Pool will endeavor to establish accounts at dealerships and independent service facilities so that the driver may directly charge services or repairs.

Driver is authorized to use credit cards to pay for services or repairs in amounts up to \$30. In addition, you are authorized to charge repairs and services at facilities where credit has been established for amounts up to \$30. If services and repairs will cost in excess of \$30, the driver must contact the Fleet Administrator, Susan Chiaroni, at 457-3110, extension 78.

A driver may be faced with a situation neither he/she nor the Golden Gate Van Pool can control. Use your common sense in an emergency situation. If a vehicle must be towed and the driver belongs to an automobile club, call them for assistance. If not, try to solve the problem in a manner which will result in the least expense. Have the van towed to the most convenient Chrysler dealer in the event an emergency repair is necessary, but this repair should not be preformed without the approval of the Fleet Administrator.

In case of a vehicle breakdown Monday through Friday, call 457-1212, give them your name, location, and telephone number. You will be contacted as soon as possible and an effort will be made to provide you with a replacement van.

In case of accident, citation, passenger injury, or road failure, fill out the Incident Report and notify the Fleet Administrator immediately.

These instructions are temporary and will be refined and formalized at a later date.

/mr

10/21/77



APPENDIX I
DISTRICT-UNION 13(c) AGREEMENT

**AGREEMENT PURSUANT TO SECTION 13(c) OF THE URBAN
MASS TRANSPORTATION ACT OF 1964, AS AMENDED**

WHEREAS, the Golden Gate Bridge, Highway and Transportation District of San Francisco, California ("Public Body") has filed an application under the Urban Mass Transportation Act of 1964, as amended ("Act"), for a demonstration grant for a vanpool system, as more fully described in the project application (hereinafter referred to as "Project"); and

WHEREAS, certain employees of the Public Body are represented by Local Union 1575 Amalgamated Transit Union, AFL-CIO ("Union"); and

WHEREAS, the Public Body and Union are parties to a 13(c) employee protection agreement dated May 24, 1974 ("Prior Agreement"); and

WHEREAS, Sections 3(e)(4) and 13(c) of the Act require, as a condition of any assistance thereunder, that fair and equitable arrangements be made "to protect the interests of employees affected by such assistance"; and

WHEREAS, the following employee protective arrangements have been agreed upon by the Public Body and Union as fair and equitable;

NOW, THEREFORE, it is agreed that in the event the Project is approved for assistance under the Act, the following terms and conditions shall apply:

(1) Except as otherwise provided herein, the terms and conditions of the May 24, 1974 Prior Agreement, incorporated herein by reference, shall apply to the vanpool project, provided, however, that the term "Project" as used in the Prior Agreement shall be deemed to cover and refer to said vanpool demonstration which is the subject of this agreement.

(2) The Project shall be performed and carried out in full compliance with the protective conditions described herein.

(3) It is agreed that for a two-year period following the date of introduction of van services pursuant to the Project, or until the vans are removed from service, if earlier, the District agrees not to reduce the number of its bus drivers below three hundred and nine (309) drivers. This guarantee shall apply if it is established that the Project has a causative effect in diminishing the size of the bargaining unit even if other factors may also have affected such unit. It is understood that reductions in the present size of the driver unit may occur due to causes other than the Project, including any economies or efficiencies unrelated to the Project brought about by ridership declines, general economic declines, funding limitations, changes in political conditions, etc.

(4) There will be no adverse impact on the individual members of the bargaining unit represented by the Union as a result of the Project.

(5) It is recognized by the parties that the principal purpose of the Project is to provide service in areas not presently served by transit routes and services presently being rendered by the Public Body. It is understood, however, that notwithstanding said principal purpose, no limitation hereby is imposed upon Public Body with regard to the areas to be served or the people to be served by the Project.

(6) It is recognized by the parties that 13(c) agreements for similar projects commonly have included a provision requiring all maintenance work on the vans, excepting warranty services and emergency repairs, to be performed by the Public Body with its facilities. In connection with this Project, however, the parties recognize and agree that by reason of the fact that the facilities of the Public Body cannot accommodate maintenance work associated with vans, the maintenance work will not be performed by the Public Body with its personnel and facilities.

(7) Any other union which is the collective bargaining representative of urban mass transportation employees in the service area of the Public Body, and who may be affected by the assistance to the Public Body within the meaning of 49 U.S.C.A. 1609(c), may become a party to this agreement by serving written notice of its desire to do so upon the other union representatives of the employees, the Public Body, and the Secretary of Labor. In the event of any disagreement that such labor organization should become a party to this agreement, then the dispute as to whether such labor organization shall participate shall be determined by the Secretary of Labor.

(8) In the event any project to which this agreement applies is approved for assistance under the Act, the foregoing terms and conditions shall be made part of the contract of assistance between the federal government and the Public Body or other applicant for federal funds; provided, however, that this agreement shall not merge into the contract of assistance but shall be independently binding and enforceable by and upon the parties thereto, in accordance with its terms, nor shall any other employee protective agreement nor any collective bargaining agreement merge into this agreement, but each shall be independently binding and enforceable by and upon the parties thereto, in accordance with its terms.

IN WITNESS WHEREOF, the parties hereto have executed this agreement by their duly authorized representatives this 2nd day of February, 1977.

APPROVAL AS TO FORM:

GOLDEN GATE BRIDGE, HIGHWAY AND
TRANSPORTATION DISTRICT

By David Miller
Attorney for the
District

By [Signature]

LOCAL UNION 1575
AMALGAMATED TRANSIT UNION AFL-CIO

C
O
P
Y

January 31, 1977

Mr. Lester Stark
President
Local Union 1575
Amalgamated Transit Union
1299 Fourth Street
P. O. Box 2237
San Rafael, California 94902

Dear Mr. Stark:

This letter is to clarify the scope and extent of the District's intent and obligation with respect to paragraph 3 of the 13(c) Agreement for the Golden Gate Bridge, Highway and Transportation District's Vanpool Project (Project No. CA-06-0095).

By entering into paragraph 3 of said Agreement, it is the intention of the parties that the District's responsibility be strictly limited to such reduction in the size of the bargaining unit as may be caused by the operation of the vanpools, and that the District makes no guarantee and assumes no liability for any diminution in the bargaining unit attributed to other causes. "Other causes" would include diminution of the bargaining unit resulting from a decline in ridership or a general economic decline. "Other causes" would also include decisions by any of the constituent localities to reduce support of the District's transit operations.

In short, the District is willing to accept responsibility pursuant to the 13(c) Agreement for any diminution in the

Mr. Lester Stark
January 31, 1977
Page Two

bargaining unit caused by, and only to the extent it is caused by, operation of the vanpools. The District is otherwise unwilling to accept additional obligations to maintain the size of the bargaining units except as stated in the present collective bargaining agreement between the District and your union.

If this explanation of the District's commitment is acceptable to you, please so indicate such acceptance by your signature below on the enclosed copy of this letter. You will note that an appropriate representative of the District has so indicated the acceptability of this arrangement on behalf of the District.

Sincerely,

DAVID J. MILLER
Attorney for the Golden Gate
Bridge, Highway and Transportation
District

DJM:kh



REPORT FORMS

APPENDIX J

MONTHLY STAFF VANPOOL OPERATIONS REPORT



APPENDIX K
VANPOOL COST CONTROL SHEET

FIGURE K-1.

MONTHLY COST CONTROL SHEET FOR EACH VAN POOL

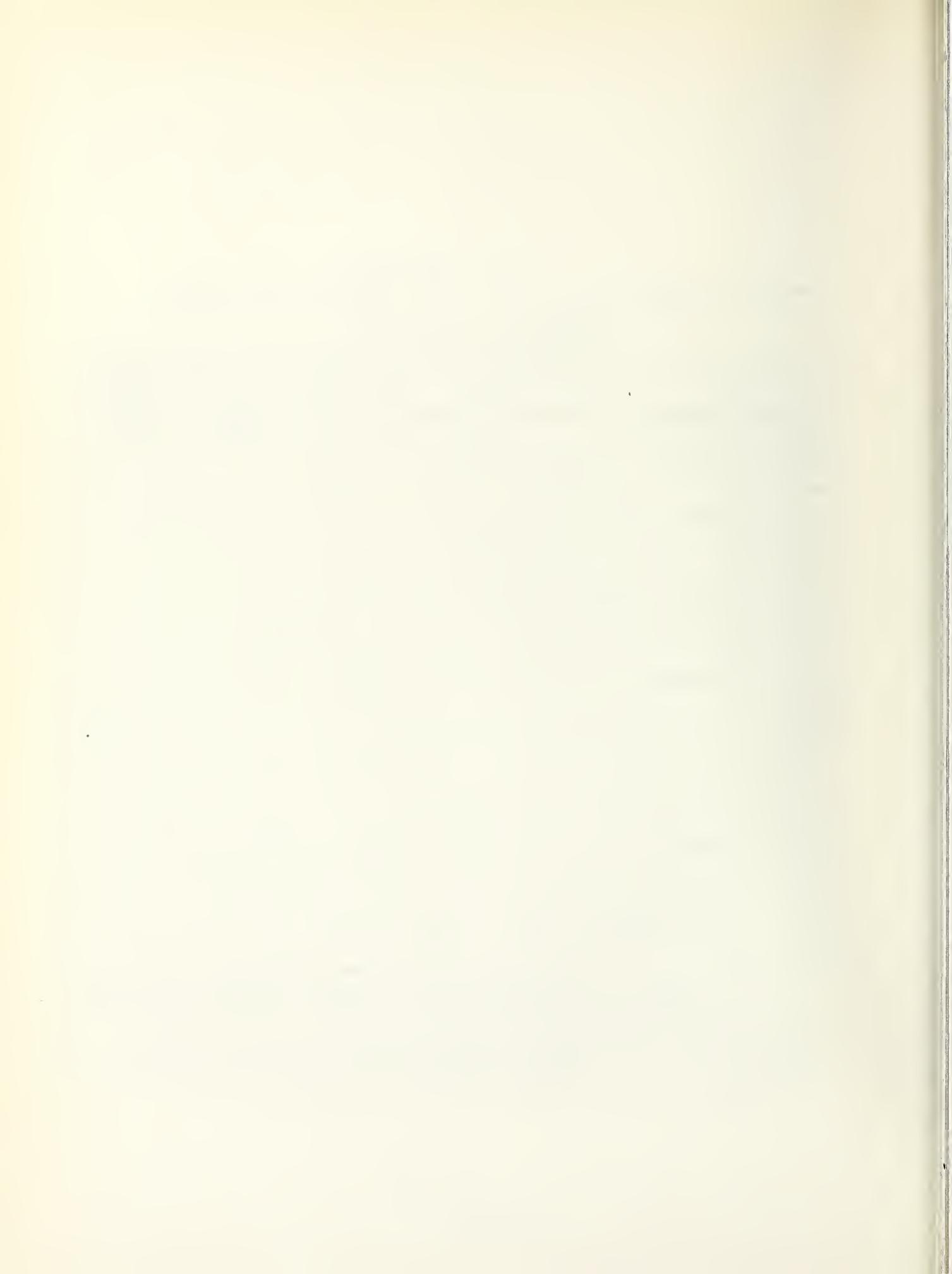
GOLDEN GATE OPERATIONAL COST CONTROL SHEET						
VAN POOL #		MONTH OF				
		1	2	3	4	5
ACCT. #	DESCRIPTION	REVENUE	EXPENSE	NET	RECLASS PERSONAL MILEAGE	PROJECT TO DATE NET
1						
2	GAS					
3						
4	TIRES					
5						
6	OIL / LUB.					
7						
8	TUNE UP / MAINT.					
9						
10	PARKING					
11						
12	INSURANCE					
13						
14	INS. DEDUCTIBLE					
15						
16	ACCIDENT REPAIR					
17						
18	RESERVE ACCOUNT *					
19						
20	PERSONAL MILEAGE					
21						
22	FOUNDING					
23						
24	OTHER (EXPEND)					
25						
26						
27	TOTAL					
28						
29						
30	*Depreciation					
31						
32						

FIGURE K-2.

MONTHLY SUMMARY COST CONTROL SHEET FOR ALL VAN POOLS

OPERATIONAL COST CONTROL SHEET													
PROJECT SUMMARY MONTH OF _____													
1 2 3 4 5													
ACCT. #	DESCRIPTION	REVENUE	EXPENSE	NET	RECLASS PERSONAL MILEAGE	PROJECT TO DATE NET							
1													1
2	GAS												2
3													3
4	TIRES												4
5													5
6	OIL / LUB.												6
7													7
8	TUNE UP / MAINT.												8
9													9
10	PARKING												10
11													11
12	INSURANCE												12
13													13
14	INS. DEDUCTIBLE												14
15													15
16	ACCIDENT REPAIR												16
17													17
18	RESERVE ACCOUNT *												18
19													19
20	PERSONAL MILEAGE												20
21													21
22	ROUNDING												22
23													23
24	OTHER (EXPLAIN)												24
25													25
26													26
27	TOTAL												27
28													28
29	*Depreciation												29
30													30
31													31

4605 - Blue
4605 - Blue
4605 - Green



APPENDIX L
VANPOOL ACCIDENT REPORT

GOLDEN GATE VAN POOL
INCIDENT REPORT

___ ACCIDENT ___ CITATION ___ PASSENGER INJURY ___ ROAD FAILURE ___ OTHER

Date: _____ Time: _____ Van No. _____

VAN INVOLVED WITH:

___ OTHER VEHICLE(S) ___ PARKED VEHICLE(S) ___ PEDESTRIAN
___ BICYCLIST ___ FIXED OBJECT

LOCATION OF ACCIDENT: _____

VAN DRIVER'S NAME: _____

DRIVER'S ADDRESS: _____

CITY: _____ STATE: _____ (ZIP) _____

PHONE: _____ DRIVER'S LICENSE NO. _____ STATE: _____

VEHICLE YEAR: _____ MAKE: _____ LICENSE NO. _____ STATE: _____

EXTENT AND LOCATION OF DAMAGE: _____

* * * * *

VEHICLE NO. 2: DRIVER'S NAME: _____

DRIVER'S ADDRESS: _____

CITY: _____ STATE: _____ (ZIP) _____

PHONE: _____ DRIVER'S LICENSE NO. _____ STATE: _____

VEHICLE YEAR: _____ MAKE: _____ LICENSE NO. _____ STATE: _____

EXTENT AND LOCATION OF DAMAGE: _____

NARRATIVE (DESCRIBE Accident/Citation/Passenger Injury/Road Failure - in detail)

SIGNATURE: _____

IF MORE THAN TWO VEHICLES ARE INVOLVED, USE TWO FORMS. IF COMMERCIAL VEHICLE INVOLVED,
LIST COMPANY NAME, ADDRESS AND PHONE NUMBER IN NARRATIVE. USE BACK OF FORM FOR CONTINUED
NARRATIVE AND DIAGRAM.

DRIVER SHALL REPORT TO FLEET ADMINISTRATOR WITHIN 24 HOURS ANY CITATION, ACCIDENT OR
PASSENGER INJURY.

10/21/77

APPENDIX M
VANPOOL VACANCY REPORT

GOLDEN GATE VAN POOL PROGRAM
VAN POOL VACANCY REPORT

Part One

Driver's Name: _____

1. Van Pool Number:.....

2. Origin: _____

3. Destination: _____

4. Date of Notification:..... (mo) - (day) - (yr)

5. Date Vacancy to Begin:..... - -

6. How was this vacancy created?.....

- 1 = Temporarily inactive van pooler
- 2 = New placement requested by active van pooler
- 3 = Van pool group has decided that they want more van poolers
- 4 = A van pooler has dropped out of the van pool
- 5 = The van pool is starting out with vacancies

7. What action is to be taken?.....

- 1 = A temporary sublet rider has been found by the van pool group.
- 2 = The van pool group will absorb the extra cost of a temporary vacancy - it would like only sublet or casual riders until an inactive van pooler returns.
- 3 = The van pool group would most like a sublet rider but will accept a permanent replacement if necessary
- 4 = The van pool group wants a permanent new van pooler.
- 5 = The van pool group has decided to absorb the cost of one less van pooler on a permanent basis.
- 6 = Other (Specify) _____

Part Two

8. How many persons have been matched for this vacancy?.....

9. Eventual outcome:.....

- 1 = Van pool vacancy filled
(Answer question no.10)
- 2 = Van pool decides to absorb cost of vacancy
- 3 = Van pool disbands due to vacancy
- 4 = Other (Specify) _____

10. Date that this vacancy is filled:..... (mo) - (day) - (yr)

APPENDIX N
VANPOOLER CHANGE OF STATUS REPORT

D. VAN POOLER TO BE PLACED IN ANOTHER VAN POOL
(NEW STATUS CODES 060 and 070)

PART ONE
 1. DESIRED DATE TO BEGIN NEW VAN POOL: (mo) (day) (yr)
 2. IS THIS VAN POOLER AN ACTIVE VAN POOLER AT PRESENT? (yr)
 1 = YES
 2 = NO

(IF YES, COMPLETE A VAN POOL VACANCY REPORT; IN ALL CASES, ATTACH THIS CHANGE OF STATUS REPORT TO THE "WORKING COPY" OF THE APPLICATION WHICH IS TO BE MAILED TO THE "TO BE PLACED - MATCHING" FILE.)

PART TWO

3. WERE ANY NEW PLACEMENTS OFFERED BY THE STAFF? (yr)
 1 = YES
 2 = NO

4. EVENTUAL OUTCOME:
 1 = VAN POOLER SUCCESSFULLY PLACED IN A NEW VAN POOL (ANSWER QUESTION 45 AND COMPLETE ANOTHER CHANGE OF STATUS REPORT)
 2 = VAN POOLER DROPPED OUT OF VAN POOL PROGRAM (COMPLETE ANOTHER CHANGE OF STATUS REPORT)
 3 = VAN POOLER REMAINED IN PREVIOUS VAN POOL (COMPLETE ANOTHER CHANGE OF STATUS REPORT)
 4 = OTHER (SPECIFY):

5. ACTUAL DATE THAT VAN POOLER BEGINS NEW VAN POOL: (mo) (day) (yr)

(UPON COMPLETION OF SECTION D, FILE THIS CHANGE OF STATUS REPORT IN THE COMPLETED CHANGE OF STATUS REPORTS FILE.)

E. VAN POOLER Termination
(NEW STATUS CODES 080)

1. DATE THAT THIS PERSON STOPS VAN POOLING: (mo) (day) (yr)
 2. DATE INITIALLY BEGAN FIRST VAN POOL: (mo) (day) (yr)
 3. IF THIS VAN POOLER IS BEING DROPPED FROM THE PROGRAM BY THE STAFF (CODE 084): INDICATE THE PRIMARY REASON FOR THE PROGRAM TO DISCONTINUE SERVICES TO THIS VAN POOLER:

- 1 = DELINQUENT IN FARE PAYMENTS
- 2 = PERSONAL INCOMPATIBILITY WITH OTHER VAN POOLERS
- 3 = RESIDENTIAL OR WORK LOCATION TOO INCONVENIENT FOR PICK-UP
- 4 = PHYSICAL DISABILITY REASONS
- 5 = OTHER (SPECIFY):

COMMENTS:

(Termination survey to be completed by the Van Pooler in cases of new status codes 085, 086, 087, 089; in all cases, this form is to be filed in the completed change of status reports file; the "working copy" of the application is to be moved to the appropriate file; also complete a van pool vacancy report.)

APPENDIX O
VANPOOL FINANCIAL AND OPERATIONAL REPORTS
TO THE PROJECT STAFF

GOLDEN GATE VAN POOL
INCIDENT REPORT

ACCIDENT CITATION PASSENGER INJURY ROAD FAILURE OTHER

Date: _____ Time: _____ Van No. _____

VAN INVOLVED WITH:

OTHER VEHICLE(S) PARKED VEHICLE(S) PEDESTRIAN
 BICYCLIST FIXED OBJECT

LOCATION OF ACCIDENT: _____

VAN DRIVER'S NAME: _____

DRIVER'S ADDRESS: _____

CITY: _____ STATE: _____ (ZIP) _____

PHONE: _____ DRIVER'S LICENSE NO. _____ STATE: _____

VEHICLE YEAR: _____ MAKE: _____ LICENSE NO. _____ STATE: _____

EXTENT AND LOCATION OF DAMAGE: _____

* * * *

VEHICLE NO. 2: DRIVER'S NAME: _____

DRIVER'S ADDRESS: _____

CITY: _____ STATE: _____ (ZIP) _____

PHONE: _____ DRIVER'S LICENSE NO. _____ STATE: _____

VEHICLE YEAR: _____ MAKE: _____ LICENSE NO. _____ STATE: _____

EXTENT AND LOCATION OF DAMAGE: _____

NARRATIVE (DESCRIBE Accident/Citation/Passenger Injury/Road Failure - in detail)

SIGNATURE: _____

IF MORE THAN TWO VEHICLES ARE INVOLVED, USE TWO FORMS. IF COMMERCIAL VEHICLE INVOLVED, LIST COMPANY NAME, ADDRESS AND PHONE NUMBER IN NARRATIVE. USE BACK OF FORM FOR CONTINUED NARRATIVE AND DIAGRAM.

DRIVER SHALL REPORT TO FLEET ADMINISTRATOR WITHIN 24 HOURS ANY CITATION, ACCIDENT OR PASSENGER INJURY.

10/21/77



DRIVER ORIENTATION CHECK LIST

POOL NUMBER _____

DRIVER'S NAME _____

VAN NUMBER _____

- _____ Received Checks
- _____ Received Policies and Procedures
- _____ Parking Location
- _____ Mileage Report
- _____ Vehicle Operating Report
- _____ No Show Schedule
- _____ End of Month Turn-In Envelope/Procedure
- _____ Incident Report
- _____ Insurance Card and Instructions
- _____ Money Receipt Book
- _____ Service and Maintenance Procedures
- _____ Trip Signs and Instructions
- _____ Survey Forms
- _____ Applications

REMARKS:

MARKETING
APPENDIX P
MARKETING EXPENDITURES

DISCUSSION OF MARKETING COSTS

The amount of staff time charged to marketing, as indicated by accounting code 1802, is \$12,132, and this should correspond to the cost of staff time derived from the evaluation contractor's cost estimates. The estimated staff cost, which is computed in Appendix B, is \$10,952, which is \$1180 less than the figure recorded by the accounting system. Note that this difference would account for most of the \$1750 discrepancy between the accounting total and the estimated total costs. The estimated cost of marketing staff time was based partly on information included in staff files but principally on estimates and recollections obtained from the staff in interviews. It was expected that the estimated time devoted to marketing based on these sources would be only a rough approximation. There is little reason, however, to believe that the accounting system's figure is completely accurate either, since it is based on the records kept by the employees during the program. There is no way of knowing how accurate the employees were in recording the time they spent in marketing efforts. The difference of \$1180 is only 10 percent of the accounting system's figure. An error of this size would have little impact on the estimated costs of most of the marketing campaigns, except for employer contacts and governmental relations in which staff costs amount to about 85 percent of total costs. These are the only two campaigns in which staff costs amount to more than 36 percent of total costs (the next highest figure for any campaign). But even a 10 percent error in the cost estimate of these campaigns would not significantly alter the evaluation of their effectiveness.

A second category of costs to be examined is the cost of consulting services provided by the public-relations firm Arnold, Palmer and Noble and the Maxwell Arnold advertising agency. The total consulting costs included in the estimates are accurate, since they are based on the actual fees charged by the firms, but the allocation of these fees among the various marketing campaigns is based on estimates obtained in conversations with representatives of the agencies and with members of the project staff. This method is inexact, of course, but there was no better method available. Assuming that any misallocations cause understatements or overstatements of no more than 10 percent for any individual campaign, the impact of such inaccuracies would be relatively minor, since consulting fees amount to over 40 percent of total cost in only three campaigns—community meetings (42%), plaza and shopping center demonstrations (49%), and press releases (89%).

The final category of estimated costs which should be examined is the production costs of the various resources used in the campaigns. Most of these estimates are apparently quite accurate, as they were based on project staff records

and verified by examination of actual invoices. Some uncertainty exists concerning certain invoices for photographic services; it is not clear from the invoices whether the photographs in question were used in slide shows, posters, brochures, or other resources. Most of these charges, amounting to roughly \$400, have been added to the cost of the slide shows. This may have resulted in a very slight overstatement of the slide show and a corresponding understatement of the costs of various other resources.

STAFF COSTS

In this section staff costs are presented by use, and the total amount of staff costs is computed. The uses are broken into three categories: campaigns, consumable materials development, and capital items development.

I. Campaigns:

A. Employer contacts	\$ 2,908
B. Governmental relations	403
C. Fairs	258
D. Take-One Holders—Public	63
E. Toll booth Handouts	376
F. Bus Handout	125
G. Petaluma Free Ride	160
H. Community Meetings	960
I. Plaza Demonstrations	495
J. Shopping Center Demonstrations	135
K. Newspaper Ads	127
L. Press Releases	284

II. Consumable Materials Development:

A. Brochures	1,210
B. Take-One Holders	50

III. Capital Items Development:

A. Kiosks	478
B. Slide Shows	2,920

TOTAL:	<u>\$10,952</u>
--------	-----------------

ARNOLD, PALMER AND NOBLE COST BREAKDOWN

1.	Press release	\$ 2,440
2.	General consulting	1,952
3.	a) Coupon ads in paper	793
	b) Radio and paper ads for community meetings	793
4.	a) Tan brochure	1,464
	b) Blue brochure	976
	c) Green brochure	488
5.	Plaza, sidestreet demonstrations	732
6.	Slide shows (first one only)	732
7.	Posters	488
8.	Flip chart presentation	366
9.	TV ads, billboard investigation	366
10.	Kiosks	244
11.	Take-one holders	244
12.	Shopping center demonstrations	122
TOTAL:		<u>\$12,200</u>

MAXWELL ARNOLD COSTS

The total of these costs were spent on design, layout, and placement of newspaper and radio ads for community meetings and the coupon newspaper ads. Based on separate but similar estimates by the evaluation contractor and Arnold, Palmer and Noble, half of the total of these costs were allocated to each of these two campaigns:

Professional Labor	\$2,900
Engraving/Set-up	1,400
	<u>\$4,300</u>

Breakdown:

Community Meetings	\$2,150
Coupon Newspaper Ads	\$2,150

TOTAL COST AND COST PER UNIT OF CONSUMABLE MATERIALS

This section will list the costs of the various consumable materials used in the marketing program, and it will present the calculations used to determine the cost per unit of these items. It will also list the uses of the items through March plus the amount of these materials not yet used as of March 31.

I. Tan Toll Booth Brochure (June 1977):

A. Staff costs	Negligible
B. Arnold, Palmer and Noble fee (consultants)	\$1,464
C. Production costs	\$2,437
D. TOTAL	\$3,900
E. Number produced	25,000
F. Cost per unit	\$.16
G. Uses to date—June toll booth handout	25,000
H. Inventory remaining	None

II. Blue Bus Handout Brochure:

A. Staff costs	Negligible
B. Arnold, Palmer and Noble fee	\$976
C. Production costs	\$613
D. TOTAL	\$2,309
E. Number produced	10,000
F. Cost per unit	\$.23
G. Uses to date—January bus handout	2,070
H. Inventory remaining	7,930

III. Green General Brochure:

A. Staff costs	\$1,210
B. Arnold, Palmer and Noble fee	\$488
C. Production costs	\$2,705
D. TOTAL	\$4,403
E. Number produced	50,000
F. Cost per unit	\$.09
G. Uses to date—January toll booth handout	20,100
Employer contacts	4,820
Take-one holders (public)	680
Government relations	150
Other	6,630
H. Inventory remaining	17,953

IV. Take-One Holders:

A. Staff costs	\$50
B. Arnold, Palmer and Noble fee	\$244
C. Production costs	\$215
D. TOTAL	\$509

E. Number produced	100
F. Cost per unit	\$5.09
G. Uses to date—Employer contacts	8
Government relations	5
Other public locations	17
H. Inventory remaining	70

TOTAL COST AND COST PER UNIT USE OF CAPITAL ITEMS

The first part of this section presents the costs of developing and producing the capital items designed for use in marketing programs. The second part deals with the cost per unit of use of the two items which have been used in major marketing campaigns through March 1978.

SECTION 1

I. Kiosks:

A. Staff costs	\$478
B. Arnold, Palmer and Noble fee (consultants)	\$244
C. Production costs	\$6,200
D. TOTAL	\$6,922
E. Uses through March 1978:	
Marin Civic Center	2 weeks
Fireman's Fund, San Rafael	2 weeks
Fireman's Fund, San Francisco	2 weeks

II. Slide Shows:

A. Staff costs	\$2,920
B. Arnold, Palmer and Noble fee	\$732
C. Production costs	\$5,725
D. TOTAL	\$9,359
E. Uses through March 1978:	
Employer contacts	13 showings
Community meetings	5 showings
Other	approx. 12 showings

III. Flip-Chart Presentation:

A. Arnold, Palmer and Noble fee	\$366
B. Production costs	\$852
C. TOTAL	\$1,218
D. Uses through March 1978	None

SECTION 2

In calculating the cost per unit of use, it is necessary to determine the total cost (given above), the unit of use, and the total number of units of use which will be provided

by the capital item during its useful life. The unit of use selected for kiosks is the kiosk-week, which is one week of use of a kiosk. The unit of use of a slide show is a showing. No unit of use has been designated for the flip chart presentation, since it has not been used as of March 31.

The total number of units that will be used during the economic lives of the items is uncertain, and it will be necessary to make assumptions as to how long each item will be in use and how often it will be used during that period. A rather conservative assumption would be that the vanpool project will be terminated in June 1979 and that marketing would be virtually discontinued after March 1979. Since the kiosks began to be used during March 1978 and probably would be used continually during the marketing period, they would be used for about 54 weeks. Since there are three kiosks, this amounts to 162 kiosk-weeks. Dividing the total cost of the kiosks (\$6,922) by 162 gives \$43 per kiosk-week. The slide shows were shown about 10 times through March 1978, and if shown twice a week (an estimate provided by the vanpool staff) through March 1979, the total number of showings would be 134, for a cost per showing of \$70.

It might be more reasonable to assume that the program will continue indefinitely. Under this long-term assumption, we might assume that the slide show will be used 500 times and the kiosks 150 weeks each (for a total of 450 kiosk-weeks) before wearing out. These assumptions would produce the following costs per unit of use: slide show—\$19 per showing; kiosks—\$15 per kiosk-week.

The results under the short- and long-term assumptions are summarized in the following table:

<u>Cost</u>	<u>Short-Term Assumption: Marketing Ends March 1979</u>	<u>Long-Term Assumption: Indefinite Marketing Program</u>
Per Kiosk-Week	\$43	\$15
Per Showing	\$70	\$19

The figures based on the long-term assumption are used in the evaluation of the marketing campaigns.

MARKETING COSTS BY CAMPAIGN

This section presents cost data concerning marketing campaigns. The costs of each campaign are broken into operating costs and capital costs, with operating costs further broken into staff costs, materials costs, and consultant (Arnold, Palmer and Noble) fees. Only Employer Contacts, Governmental Relations and Community Meetings involve any capital costs. The figures include costs through March 1978.

The conservatively estimated cost per unit of use will be used for each of the capital items. Each kiosk-week of use is charged at \$15, and each slide show is charged at \$17. Note that no costs per unit of use have been estimated for the projection equipment, flip chart presentation, banners, posters, signboard, or showcards. The reasons are as follows: the projection equipment only cost \$639, and amortization of this small amount would be complicated by the possibility that the equipment will be available for non-marketing uses during and after the vanpool project; the flip chart presentation had not been used in any marketing campaigns as of March 31; and the other items mentioned above were not used in the marketing campaigns evaluated in this section.

Employer promotion has involved the use of the slide shows for 13 showings at \$19 per showing, for a cost of \$247, plus three kiosks, each exhibited for two weeks at \$15 per kiosk-week, for a cost of \$90. These figures added to the operating costs make the total cost of the employer contacts campaign \$2898 and amounts to 12 percent of the total. The governmental relations campaign made use of the slide shows four times, at \$19 per showing, for a cost of \$76, which raises the total cost of this campaign to \$546 and amounts to 14 percent of the total. The slide shows were used at five community meetings, adding \$95 to the cost and resulting in a total cost of \$7095 for the campaign and amounts to one percent of the total. Note that the additional costs for use of capitalized items are small in comparison to what has been termed as the operating costs.

I. Employer Contacts:

A. Operating Costs—	
1. Staff costs	\$2,908
2. Materials	
Vehicles: 1053 miles @ 17¢	179
Brochures: 4820 @ 9¢	434
Take-One Holders: 8 @ \$5.09	<u>41</u>
3. Subtotal	3,561
B. Capital Costs—	
1. Kiosks: 6 kiosk-weeks @ \$15	90
2. Slide Shows: 13 showings @ \$19	<u>247</u>
C. TOTAL	\$3,898

II.	Governmental Relations:	
A.	Operating Costs—	
1.	Staff costs	\$403
2.	Materials	
	Vehicles: 150 miles @ 17¢	26
	Brochures: 180 @ 9¢	16
	Take-One Holders: 5 @ \$5.09	<u>25</u>
3.	Subtotal	470
B.	Capital Costs—	
1.	Slide shows: 4 showings @ \$19	<u>76</u>
C.	TOTAL	\$546
III.	Fairs:	
A.	Operating Costs—	
1.	Staff costs	\$258
2.	Materials: booth rental	<u>250</u>
B.	TOTAL	\$508
IV.	Take-One Holders—Public:	
A.	Operating Costs—	
1.	Staff costs	\$ 63
2.	Materials	
	Brochures: 680 @ 9¢	61
	Holders: 17 @ \$5.09	<u>87</u>
B.	TOTAL	\$211
V.	Toll booth Handouts:	
A.	Operating Costs—	
1.	Staff costs	\$ 376
2.	Materials	
	June 1977 brochures	3,900
	Jan. 1978 brochures: 20,100 @ 9¢	<u>1,809</u>
B.	TOTAL	\$6,085
VI.	Bus Handout:	
A.	Operating Costs—	
1.	Staff costs	\$125
2.	Materials: 2070 brochures @ 23¢	<u>476</u>
B.	TOTAL	\$601
VII.	Petaluma Free Ride:	
A.	Operating Costs—	
1.	Staff costs	\$160
2.	Materials	
	Newspaper ads	380
	Vehicles: 400 miles @ 17¢	<u>68</u>
B.	TOTAL	\$608

VIII.	Community Meetings:	
A.	Operating Costs—	
1.	Staff costs	\$ 960
2.	Materials	
	Newspaper ads	1,913
	Radio ads	1,159
	Vehicles	25
	Maxwell Arnold fee (ad agency)	2,150
3.	Arnold, Palmer and Noble fee	793
B.	Capital Costs—	
1.	Slide show: 5 showings @ \$19	<u>95</u>
C.	TOTAL	\$7,095
IX.	Plaza Demonstrations:	
A.	Operating Costs—	
1.	Staff costs	\$ 495
2.	Materials	
	Handouts: 1529 @ 10¢	153
	Vehicles: 440 miles @ 17¢	75
3.	Arnold, Palmer and Noble fee	<u>732</u>
B.	TOTAL	\$1,455
X.	Shopping Center Demonstrations:	
A.	Operating Costs—	
1.	Staff costs	\$135
2.	Materials	
	Handouts: 292 @ 10¢	29
	Vehicles: 80 miles @ 17¢	14
3.	Arnold, Palmer and Noble fee	<u>122</u>
B.	TOTAL	\$300
XI.	Newspaper Ads:	
A.	Operating Costs—	
1.	Staff costs	\$ 127
2.	Materials	
	Rental of ad space in papers	5,542
	Maxwell Arnold fee	2,150
3.	Arnold, Palmer and Noble fee	<u>793</u>
B.	TOTAL	\$8,612
XII.	Press Releases:	
A.	Operating Costs—	
1.	Staff costs	\$ 284
2.	Arnold, Palmer and Noble fee	<u>2,440</u>
B.	TOTAL	\$2,724

APPENDIX Q
MARKETING MATERIALS

Consider the Van Pool Alternative

Consider the Van Pool Alternative Some facts . . .

Thirty-five vans are available for use by commuters traveling to and from work between Marin, Napa, Sonoma and San Francisco Counties. They have been purchased by the Golden Gate Bridge, Highway and Transportation District under a demonstration grant from the Urban Mass Transportation Administration. The project is designed to acquaint commuters with the Van Pool concept. Later those wishing to continue vanpooling will be assisted in transferring into a private van pool arrangement.

It is easy to begin Vanpooling. Passengers commit to ride by the month only. The factors used to compute the monthly fare are: operating costs including fuel, maintenance, tires, etc., and other costs which include insurance, depreciation and parking. All fares will vary with mileage.

Who can participate?

Residents of Marin, Napa, Sonoma and San Francisco Counties commuting to and from work in either direction.

Riders may terminate participation in the Van Pool Program at any time, by notifying the Driver-Coordinator or Back-Up Driver by the 25th day of the final month of ridership.

Why Van Pool?

Because Vanpooling is

- Economical
- The custom way to commute
- Personalized, door to door service
- Comfortable
- Faster, using preferential lanes
- Energy efficient
- Environmentally beneficial

Advantages over the auto commute

- Because vans carry up to three times the passenger load for less than twice the operating cost of an automobile, costs per passenger mile are substantially lower.
- Vans can operate economically from areas of lower employee concentration and at shorter distances than buses.
- Since participants do not take turns driving as in the typical carpool, some commuters can dispense with a second car.
- Van Pools can provide personal pickup service, in contrast to buses which usually require an assembly of riders at common boarding points.

The Vehicles

The vehicles are Plymouth Voyager Vans, equipped with a 360 C.I.D. V-8 engine, front and rear air conditioning, power steering, power brakes, automatic transmission, and AM radio. They are fully carpeted. There are two types, the 12-passenger Deluxe van with cloth and vinyl bench seats, and the 10-passenger Luxury van equipped with individual high backed reclining seats.

Golden Gate  Van Pool

FOR MORE INFORMATION

Please call

GOLDEN GATE VANPOOL 457-3110

BRIDGE HANDOUT



Commuter Fares

Fares vary by commute trip distance and are composed of operating expenses, depreciation and other costs divided by the number of riders (not including the driver).

Each regular rider will be asked to remit the first month's fare in advance. Payments will be made to the Driver-Coordinator by check or money order, payable to the Golden Gate Bridge, Highway & Transportation District. Thereafter, monthly fares will be due by the 25th day of the month.

How much can Golden Gate Van Pool save you?

The amount of savings depends on the distance traveled. Here are some approximate monthly comparative costs computed on a round trip basis.

21 Day Monthly Cost Comparison Rate Schedule PER PASSENGER

Round Trip Miles	Origin Point	Tenish Passenger Lumum Van	Twelve 10 Passenger Delux Van	Single Driver 18¢/Mile	Estimated Savings to you
20	Sausalito	\$34.00	\$27.00	\$ 63.00	\$ 29.00
25		35.00	28.00	79.00	44.00
30	Mill Valley	36.00	29.00	95.00	59.00
35		37.00	30.00	110.00	73.00
40	Fairfax/ San Rafael	39.00	31.00	126.00	87.00
45		40.00	33.00	142.00	102.00
50	Woodacre/	41.00	34.00	158.00	117.00
55	Ignacio	43.00	35.00	173.00	130.00
60	Novato	44.00	36.00	189.00	145.00
65		45.00	37.00	205.00	160.00
70		46.00	39.00	221.00	175.00
75		48.00	40.00	236.00	188.00
80	Petaluma	50.00	41.00	252.00	202.00
85		52.00	43.00	268.00	216.00
90	Conest	53.00	45.00	284.00	231.00
95		56.00	47.00	299.00	243.00
100	Rohnert Park	59.00	49.00	315.00	256.00
105		61.00	50.00	331.00	270.00
110		63.00	51.00	347.00	284.00
115	Sausalito	65.00	54.00	362.00	297.00
120	Santa Rosa	67.00	56.00	378.00	311.00

NOTE: The fares will vary with mileage and are based on a combination of operating costs (fuel, maintenance, tires, etc.) and other costs (depreciation, insurance and parking). Bridge tolls are not included in the fare calculation. During the period of operation, the Golden Gate Van Pool will operate Bridge fares (1.) Miles are to San Francisco central business district. (2.) Fare calculations based on 9 paying passengers. (3.) Fare calculations based on 10 paying passengers.

Driver-coordinator/back-up driver

Benefits to drivers

- Free transportation when driving.
- Personal family use of the van during non-working hours at a cost of 11¢ per mile.
- Possible elimination of one family automobile and related fixed costs for insurance, depreciation and license.

Selection criteria:

- At least 25 years old
- Valid California drivers license
- No more than one chargeable accident or citation within the past three years, and none within the past twelve months.
- A good attendance record, whether absences are involuntary or work related such as business trips.
- Sufficient automotive knowledge to recognize existing or potential mechanical problems.
- Ability to handle responsibilities, such as organization and maintenance of the commuter group, and simple record-keeping.
- Residence in an area at sufficient distance and with a sufficient rider concentration to support a pool.

Driver Responsibilities

- Organize and maintain a pool of at least 9 or 10 riders, with the assistance of the District's Van Pool Staff.
- Plan routes, pick up times, and locations.
- Keep records of rider participation and collect fare payments.
- Operate the van as primary driver and arrange for its operation by back-up drivers during periods of illness, vacations, or other absences.
- Fuel and clean the van.
- Arrange for regular service and maintenance to be performed by designated service facilities.

Insurance

Each van will carry comprehensive and collision coverage and the following amounts of insurance protection for its riders.

Combined single limit liability \$1,000,000
 Medical (per person) 2,000
 Uninsured Motorist 15/30,000
 The premium for this coverage will be paid by the District and its actual cost included as a component in the fare calculation.

How can you participate?

The first step is to return the form attached. It is not a commitment but will indicate your interest in vanpooling.

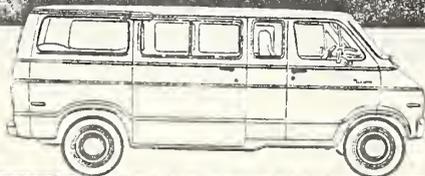


TEAR HERE

GOLDEN GATE VAN POOL IS A
 DEMONSTRATION PROJECT OF THE
 URBAN MASS TRANSPORTATION ADMINISTRATION

Consider the **VAN POOL** alternative!

If you like
going by bus,
you may like
Vanpooling
even more.



A Van Pool provides:

- An economical fare
- A guaranteed seat
- A door to door commute

GOLDEN GATE BRIDGE HIGHWAY AND TRANSPORTATION DISTRICT

Vanpooling may work best for you

Thirty-five vans are now being placed with groups of commuters who live near one another and who work in the same area.

Riders share the costs of commuting – gasoline, maintenance, insurance, etc. The monthly charge depends on the distance traveled. In most cases it's slightly less than bus fare. Vans offer a direct commute from your home to your company door.

In each van pool there is a driver/coordinator. He does all the driving, collects the monthly fare and arranges for van servicing and maintenance. In return, he rides free and can use the van for a small mileage charge during non-working hours.

Vanpooling is the ideal solution for people who live away from Golden Gate Transit bus routes, who work outside San Francisco, and for those who must sometimes stand on the bus.

If you are interested in a personalized commute, send in the attached card. You will be contacted when a van pool group is being assembled that will meet your special needs. For information, phone (415) 457-3110.

(Golden Gate Van Pool is a demonstration project of the Urban Mass Transportation Administration.)

COMMUTE BUS HANDOUT

Introducing Vanpooling



**A Personalized, Economical
Way to Commute**



FOR BAY AREA COMMUTERS



GOLDEN GATE VANPOOL

Across the country more than 10,000 commuters are enjoying a new type of first class travel directly from home to work each day with friends and neighbors. Relaxed in their reserved seats, they escape the commotion of the daily commute and save hundreds of dollars each year.

They're VANPOOLING! You can, too!

Here's how it works

Vans are now available for use by commuter groups of 10 to 15 people living or working within the ten county San Francisco Bay Area.

One member of each group drives and takes care of the van. The others split all costs (including full insurance coverage) through a low monthly fare which is less costly than driving alone.

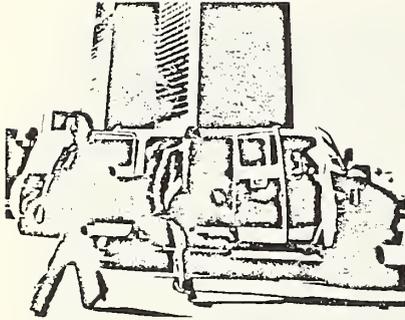
Conscientious drivers make vanpooling work. Each is a fellow commuter selected for his or her dependability and safe driving record. Drivers and their designated alternates are responsible for seeing that their vans are punctual, clean and well-maintained. In exchange, drivers pay no fare — they enjoy a free commute and personal use of a van for a nominal charge per mile.

Vantastic

Vanpooling can make the daily commute a pleasant experience. The vans are fully-equipped with front and rear air conditioning, power steering, power brakes, automatic transmission, radio and full carpeting. There are two types, the Deluxe van seating 12 to 15 with custom bench seats and a 10 or 12 passenger Luxury van equipped with airline type reclining bucket seats.



JOINT GOLDEN GATE - RIDES, INC. BROCHURE



What does it cost?

Monthly vanpool fares are based on the type of van, the number of riders and the daily round trip distance. One payment covers all costs - fuel, maintenance, insurance and leasing of the van. If you ride in a vanpool you save on commuting expenses. Just how much depends on how far you travel. These estimates give a good idea:

Daily Round Trip Miles	Monthly Auto Driving Costs*	Typical Monthly Vanpool Fare Deluxe Van
30	\$ 50	\$29-38
40	67	31-41
50	84	34-43
60	108	36-45
70	118	39-48
80	134	41-50
90	151	45-52
100	168	49-55

* Based on FHWA costs. Elements more average 21 days per month.

Vanpooling is one of the best ideas yet devised to reduce energy consumption, traffic congestion, air pollution and the need for more parking facilities. For these reasons the San Francisco Chamber of Commerce, CalTrans and other Bay Area organizations have taken an active role in promoting vanpooling. Companies such as Lawrence Livermore Labs, Syntex and Fireman's Fund already have endorsed vanpooling and are helping their employees enjoy its benefits:

How can you participate?

Fill out the attached application.

Encourage your neighbors and fellow employees to do the same. When enough people matching your commute have expressed interest, we'll put you in a van.

With vanpooling everyone comes out a winner:

The Vanpool Passenger

- Relaxes
- Saves money
- Enjoys a personalized, custom commute
- Has a reserved seat and reliable service
- Rides with a congenial group of people
- Saves on insurance costs

The Vanpool Driver

- Enjoys a free commute
- Has personal use of the van, evenings and weekends

The Employer

- Improves employee punctuality and morale
- Reduces the need for more parking facilities
- Decreases congestion at the work site
- Creates a favorable image as a good corporate neighbor

The Community at Large

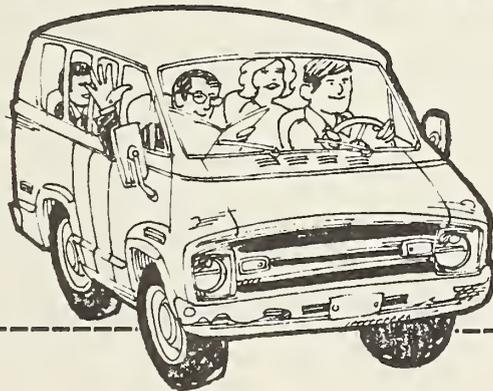
- Conserves fuel
- Reduces air pollution
- Eases traffic congestion
- Makes more efficient use of existing highways and parking lots

TEAR HERE

FOR MORE INFORMATION

<p>IN THE NORTH BAY:</p>  <p>Golden Gate Vanpool (415) 457 3110</p>	<p>FOR OTHER LOCATIONS:</p>  <p>FOR BAY AREA COMMUTERS (415) 863 9588</p>
--	---

MARIN • SONOMA • NAPA COMMUTERS
CONSIDER THE
VANPOOL ALTERNATIVE!



Door-to-Door Commute • Economical
Guaranteed Seat • Comfortable • Convenient
Driver/Coordinator Rides Free.



SANTAROSA
\$56.00

PETALUMA
\$41.00

NOVATO
\$36.00

SAN RAFAEL
\$33.00

Learn all about it at the Special Meeting:

For more information call: Golden Gate Vanpool 415/457-3110



NEWSPAPER AD FOR COMMUNITY MEETINGS

Q-7/Q-8

APPENDIX R
"THE VANGUARD NEWSLETTER"

Golden Gate Bridge,
Highway and Transportation District
(415) 457-3110



Issue No. 1, Vol. No. 1
July, 1978

THE VANGUARD NEWSLETTER

HAPPY COMMUTING!

Welcome to the exclusive club of commuters who are enjoying the comfort and convenience of VANPOOLING. Our plan is to publish bimonthly, distributing to all current VANPOOLERS and non-placed applicants. We would like to include in the publication material from you and your fellow POOLERS. We invite you to submit stories, comments, anecdotes, items for sale, etc. to Dee Lukshin, our Editor. If you have a suggestion for an article of interest to VANPOOLERS, our staff will look into it.

Once again on behalf of the Vanpool Staff, welcome to the Golden Gate VANGUARD. May our vanpooling service be efficient, convenient and economical.

Richard H. Ribner

VANPOOL DEVELOPER / PROJECT ADMINISTRATOR

John Shellenberger, Jr.

SPECIAL PROJECTS ADMINISTRATOR

VANPOOLING

In 1972, the 3M Company began the first organized Vanpool Program in the United States with only six vans. No one knew if it would work, but because of severe parking and congestion problems in the area around the 3M plant it seemed worth a try.

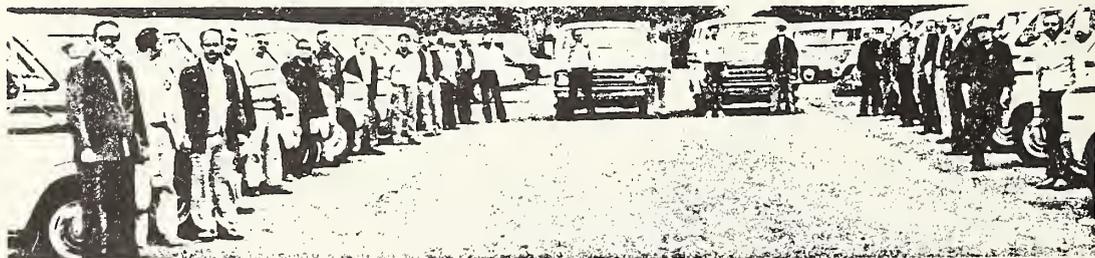
We now know what a success vanpooling is. 3M operates more than ninety vans and more than seventy companies around the country have developed their own programs. Over two thousand commuter vans are operating in some kind of organized program.

The Bridge District's program, which was launched in October, 1977, now has thirty groups in operation. It is a remarkably well liked mode of commuting and offers the potential for a lot more growth. It's much better than driving or standing and waiting for the bus. And, it doesn't require ever increasing public subsidies to keep it going.

The future of vanpooling is unlimited. More and more, entrepreneurial drivers are purchasing their own vans, organizing a group and collecting fares to cover their costs. Leasing programs are also being developed which relieve the driver of the risk of purchase, but offer the same service combined with an insurance package.

As highways become more crowded, fuel costs rise, parking spaces diminish, and transit systems fail to keep pace, vanpooling will increasingly offer the most attractive option. So, keep on pooling. You're doing the right thing! You're in the Vanguard.

VANPOOLERS AT THE FIRST DEFENSIVE DRIVER TRAINING COURSE
HELD AT SONOMA STATE COLLEGE ON APRIL 1, 1978





**Vanpool Staff
Interview
with
Sue Chiaroni**

Fleet Administrator/Pool Coordinator

What is your function exactly?

I make sure that the fleet of vans is operative. I am responsible for providing service and maintenance, for delivering vans to users, and for replacing vans where necessary. I work directly with vanpool drivers in helping them make the transition to private vanpool arrangements, along with coordinating organization of pool groups. It may sound very boring, but it really isn't. We are doing something different and innovative.

Has the program changed since you joined?

The program has had many changes since it began. We are able to make changes whenever practical or possible, since we are a demonstration project.

What do you like best about your position?

My job tasks are continually changing as the program changes and I like the challenge. I enjoy meeting and working with vanpoolers. This program allows us to be very creative and present ideas to help further promote vanpooling.

What do you feel needs improvement?

I definitely feel we need to have a Driver's Handbook with instructions that relate to breakdowns, the filling out of forms and also would include vanpool driver's maintenance procedures. We should offer these courtesies, and it is something I'm working on now.

Tell us something about your life away from vanpooling.

I always enjoy being with people. I participate in outdoor sports like waterskiing, snowskiing, camping and tennis. I like French food!

*Do you have a car for sale?
Need to sublet your seat?*

*Are you an occasional rider looking for a ride?
Other items that need advertising or publicizing?*

Contact Dee Lukshin, 479-3110, extension 79.
(with your copy)

ALTERNATE FARE STRUCTURE

In an effort to make vanpooling more attractive you may want to consider using an alternative fare structure.

It has the inherent stability of a fixed monthly subscription, yet provide a measure of relief for those who, for personal or business reasons, are forced to miss one or more days a week. Each rider is assessed approximately one-third of this share of the monthly costs as a fixed subscription. The remaining two-thirds is divided by 17 (about 80% of normal 21 days work month) and is assessed on a per ride basis. Each van will break even if riders miss, on the average, one day a week. People missing several days or even a whole month, might be willing to pay the monthly fee to guarantee themselves a seat when they return. Those who ride every day pay a little more than average, but not out of proportion to the service they have received. Of course, this would require a fully subscribed van in order for it to be cost effective. Here is an example:

Petaluma to San Francisco trip

\$50.00 total fare Luxury
16.50 monthly subscription
1.97 per day

\$16.50
41.37 21 day rider
\$57.87 (\$2.75/day)

\$16.50
33.49 17 day rider
49.99 (\$2.94/day)

\$16.50
25.61 13 day rider
\$42.11 (\$3.23/day)

★ Minimum 13 day ride

SUMMER VACATION VACANCIES

As the summer months are approaching, we recognize that vacations will soon be here. This will not only mean a lot of tanned, rested and happy vanpoolers, but also some empty seats in your vans. There are many ways for the pool groups to work out this problem. It might include charging a daily rate for the occasional rider and subletting your seat to a friend to guarantee your seat upon your return.

We suggest that you start building up a reserve of occasional riders, remembering that we would always assist you in finding additional riders. (See article on Alternate Fare Structure).

RIDERS WANTED

If you are interested in an occasional ride, or in joining an existing pool, please contact the Vanpool Coordinator, 457-3100, ext. 79, for specific details. Also, if you are interested in signing up for one of the presently filled vanpools, contact us so we may place you on a waiting list to fill vacancies as they occur.

Name & Work Phone	Origin	Destination	Work Hours	Rate	Status
Lancaster-542-0460	Cotati	Financial District	8:00-4:15pm	\$56.00	Filled
Duckor-768-0485	Mill Valley	Financial District	8:00-5:00pm	\$29.00	Filled
Fay-781-4211 ext. 6329	Novato	Financial District	8:00-5:00pm	\$45.00	Vacancy
Piazza-772-9417	Novato	Financial District	8:00-4:30pm	\$36.00	Filled
Boyla-929-2704	Novato	Firaman's Fund San Francisco	7:30-3:45pm	\$43.00	Filled
Gallagher-561-3404	Novato	Prasidio-San Francisco	7:30-4:15pm	\$45.00	Vacancy
Brown-543-9660, ax. 220	Petaluma	Financial District	7:30-4:00pm	\$50.00	Vacancy
Layne-396-4887	Petaluma	Financial District	7:30-4:30pm	\$46.00	Vacancy
Stetlar-542-6643	West Petaluma	Financial District	8:00-5:00pm	\$62.00	Vacancy
Replogle-556-3891	Petaluma	San Francisco Federal Bldg.	7:00-3:30pm	\$49.00	Filled
Baratt-561-5876	ataluma	Prasidio	7:30-4:15pm	\$47.00	Filled
Battams-768-2484	Petaluma	Financial District	8:15-5:00pm	\$47.00	Filled
Schisler-332-0334	Petaluma	Sausalito	7:30-4:00pm	\$42.00	Vacancy
Arandar-989-6580	Rohnart Park	Financial District	8:00-5:00pm	\$61.00	Vacancy
Hammond-556-5272	Rohnart Park	Financial District	8:00-4:45pm	\$58.00	Filled
Sorensen-485-6101	Rohnert Park	Fireman's Fund San Rafael	8:00-4:15pm	\$36.00	Filled
Danca-479-1100, ext. 2034	Rohnert Park	San Rafael Civic Cantar	8:00-4:30pm	\$38.00	Vacancy
Maigrat-556-7888	Santa Rosa	Financial District	7:00-3:30pm	\$72.00	Vacancy
Fairbank-442-2333	East Santa Rosa	Financial District	8:00-4:30pm	\$66.00	Filled
Seegalken-768-4458	West Santa Rosa	Financial District	8:00-4:30pm	\$66.00	Filled
Whitty-456-7278	Santa Rosa	San Rafael PG & E	8:00-4:30pm	\$44.00	Vacancy
Martignoli-454-1460, ex. 2361	Santa Rosa	San Quantin	8:00-4:00pm	\$48.00	Filled
Fettters-221-4810, ext. 437	Santa Rosa	Veteran's Hospital San Francisco	8:00-4:30pm	\$42.00	Filled
Green-485-6450	Vallejo	Fireman's Fund San Rafael	7:30-3:45pm	\$34.00	Vacancy

Those vans showing vacancies can be for more than one vacancy.



FOR INFORMATION REGARDING THE GOLDEN GATE VANPOOL PROGRAM
CALL THE VANPOOL COORDINATOR AT 457-3110

VAN—FAIR

Golden Gate Vanpool will be represented at the Sonoma County Fair, July 10 through July 22, with a kiosk and Van display.

We are looking for enthusiastic vanpoolers to spread the word about your economical and convenient commute. Whatever hours you can contribute will be greatly appreciated. In return, we offer close parking and a free pass. Fair hours are 10:00 am to 10:00 pm. Perhaps you'd like some time out at our outdoor display, while the rest of the family participates in the carnival rides. To volunteer to share the wealth of your first-hand vanpool experience, call 457-3110

IF YOU HAVE CHANGED:

- ✓ Work hours
- ✓ Work location
- ✓ Your address

or,
wish to terminate
interest in vanpooling

Please notify us at

457-3110

THE QUESTION MAN????

What is a Vanpool?

(asked at Marin Surplus and Bargain Bpx, San Rafael)

Ray:

A vanpool? I don't know, I don't read newspapers much.

Question: Do you know what a van is?

Answer: A van is something that blows air.

Question: No, not a fan, a van.

Answer: Sure, a commuter gets together with others and they carpool with a van.

Gary:

A what? No, say that again. Who—a vanpool? I talked to one of those fellows in Novato. He had one of those vans that he had contracted for. He hopes to have ten people riding and will be trying to get two more. I am a curious person. I was looking it over and asked him about it.

Stella:

I have had...do I know what it is? I have heard of it. I don't go to work, so I haven't had to find out. I am sure I have heard that name before. I heard it on the talk show and I think it is a good idea. It is nice that they have that cooperation and better ways for transportation. I think more people should look into it.

Clay:

(11 years old) A what? A Vanpool. HA, HA. What happens if you get the question right or wrong? A Vanpool. I think it's something on the back of the van that you pull trailers with, or when a tow truck pulls the same. My Dad is a mechanic and I have never heard of a Vanpool. Thanks a lot...I have my conference on Monday and no school today.

*Do you know...
that spouses now may qualify as Drivers?
Call 457-3110
for a Driver's application
so we can process a DMV check*

VANGUARD
Golden Gate Vanpool
Box 9000, Presidio Station
San Francisco, California 94129



No need for tools with vanpools.

Need gas — say I'll pass!

Like a leisurely commute?

then let us compute....

your departure,
destination and
working hours.

We have a batch

to give you a match

so you can catch...

your vanpool in the morn

your vanpool in the eve

We've got it up our sleeve!

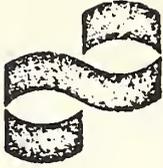
For a demo ride: 457-3110

CONSIDER THE VANPOOL ALTERNATIVE!

SURVEYS

APPENDIX S

INITIAL VANPOOLER SURVEY FORM AND RESULTS



GOLDEN GATE BRIDGE, HIGHWAY AND TRANSPORTATION DISTRICT

Dear Golden Gate Van Pooler:

As you may know, the Golden Gate Van Pool Project is a federally funded demonstration by which the Golden Gate Bridge, Highway and Transportation District is testing the concept of promoting van pools in the Golden Gate corridor. As such, we hope to gain a lot of information about the marketability and operation of van pools. Please help our evaluation effort by taking a few minutes to fill out this confidential questionnaire. Please return this form to us within 5 days.

An addressed and stamped envelope is provided for the return of your questionnaire. If you have any questions about the survey, please contact Carlito Cardona at 457-3110, Extension 79, during normal working hours.

Sincerely yours,

Richard H. Ribner

John Shellenberger, Jr.
Special Projects Administrator

Richard Ribner
Van Pool Developer

- Col.*
14. What was your usual TOTAL one-way travel time to work?... 38-39
(minutes)
15. How much of this travel time was spent in vehicles?..... 40-41
(minutes)
16. How much of this travel time was spent walking or waiting? 42-43
(minutes)

BUS OR FERRY USERS PLEASE SKIP TO QUESTION NO. 18

AUTOMOBILE USERS - PLEASE COMPLETE QUESTION NO. 17 (a) THRU (g):

17a. Were you normally (indicate only one): 44
 1 = Driving alone
 2 = The regular driver carrying regular passengers
 3 = A regular passenger
 4 = An alternative driver/passenger in a car pool

b. How many persons over 16 (including the driver) rode together?.. 45

c. What type of vehicle did you normally use? (indicate only one;
 if carpooling with different vehicles, indicate your vehicle). 46
 1 = Sub-compact 3 = Intermediate (Standard)
 2 = Compact 4 = Full size 5 = Van

d. Where was the vehicle parked? (indicate one) 47
 1 = Company parking 2 = Public parking 3 = Street

e. If there was a charge for parking, what was the total
 cost per month? (rounded off to the nearest dollar) ...\$ 48-49

f. How many stops to pick-up passengers were normally made
 after you were in the vehicle? 50

g. How many stops were normally made to drop off passengers
 before you left the vehicle? 51

AUTOMOBILE USERS NOW SKIP TO QUESTION NO. 19, NEXT PAGE

BUS OR FERRY USERS:

18. What was the total one-way fare that you paid
 (including transfers made to other systems)? \$ 52-54

ALL RESPONDENTS:

19. How many blocks are there from your residence to the nearest Golden Gate Transit bus stop? 55 61.
1 = Less than one block 3 = Four to six blocks
2 = One to three blocks 4 = More than six blocks
20. If you usually go or were to go to work by Golden Gate bus, using the closest route, would you make a transfer to another Golden Gate route? 56
1 = Yes 2 = No 3 = Don't know
21. How many blocks are there from the nearest Golden Gate bus stop to your office or work station? 57
1 = Less than one block 3 = Four to six blocks
2 = One to three blocks 4 = More than six blocks
- 22a. If you go or were to go to work by Golden Gate bus, would you transfer to MUNI, BART or AC Transit? 58
1 = Yes 2 = No 3 = Don't know
- b. If so, how close does one of these three transit services come to your work location? 59
1 = Less than one block 3 = Four to six blocks
2 = One to three blocks 4 = More than six blocks
23. How many motor vehicles, not including motorcycles, are owned or operated by members of your household? 60
24. How often do you have access to a motor vehicle? 61
1 = At all times 3 = Occasionally
2 = Frequently 4 = Seldom or never
25. Do you have a valid driver's license? 62
1 = Yes 2 = No
26. How many persons are there in your household? 63
27. What is the combined annual income of all members of your household? 64
1 = \$0-\$9,999 3 = \$15,000-\$19,999 5 = \$25,000-29,999
2 = \$10,000-\$14,999 4 = \$20,000-\$24,999 6 = \$30,000 and over
28. How many persons contribute to that income? 65

29a. Please indicate if you have heard or read about the Golden Gate Van Pool Program in any of the following ways:

		1 = Yes 2 = No			1 = Yes 2 = No
<u>Code</u>	<u>Source of Information</u>	↓	<u>Code</u>	<u>Source of Information</u>	↓
01	Newspaper Article	66	07	Newspaper Advertisement.	72
02	Radio Talk Show	67	08	Radio Advertisement	73
03	Television Show or News	68	09	Television Advertisement	74
04	Toll Booth Brochure.....	69	10	Golden Gate Van on Road.	75
05	Employer Promotion	70	11	Friend or Relative.....	76
06	Promotion in Residential Area	71	12	Other (Specify)	77

- b. Using the code numbers, please indicate which source of information was most influential in getting you interested in the van pool program? 78-79
- c. Have you ever telephoned the CALTRANS 861-POOL number? 80
- 1 = Yes 2 = No

30a. Please indicate how important the following factors are in your decision to join a van pool:

1 = Extremely important	3 = Only slightly important	
2 = Quite important	4 = Not important at all	

01	Convenience of not driving	81
02	Carpool broke up	82
03	Available where bus service is not	83
04	Decreases fuel use	84
05	Gives me time to relax	85
06	Allows someone else to use car	86
07	More reliable than bus service	87
08	Door-to-door service	88
09	Guaranteed seat	89
10	Cost savings	90
11	Saves time	91
12	More reliable than carpool	92
13	Decreases pollution	93
14	More comfortable than bus	94
15	I can consider owning one less car.....	95

- b. Using the code numbers, please indicate your primary reason for choosing van pooling 96-97

INITIAL VANPOOLER SURVEY

The Initial Vanpooler Survey is distributed at the time of joining a vanpool. The following table summarizes the responses of the 262 vanpoolers who completed and returned the survey forms. The summary includes the drivers (31) responses; seventy-three percent of the vanpoolers were Market, #1 commuters, south across the bridge.

TABLE S-1.
INITIAL VANPOOLER SURVEY FORM AND RESULTS

CHARACTERISTICS (n=)	Market		Role
	#1 (190)	#2 (72)	
Total (262)			Driver (31)
<u>RESIDENCE</u>			
Marin			
Sonoma			
Napa			
San Francisco			
East Bay			
South Bay			
<u>PREVIOUS MODE</u>			
Auto	33%	99%	58%
Public Bus	60	1	36
Club Bus	5	0	6
Ferry	2	0	0
	100%	100%	100%
<u>PREVIOUS AUTO SUBMODE</u>			
Drive Alone	10%	25%	10%
Alternate Driver	15	44	24
Regular Driver	3	22	17
Regular Passenger	5	8	7
Not Applicable	67	1	42
	100%	100%	100%
<u>PREVIOUS VEHICLE OCCUPANCY</u>			
One	15%	25%	4%
Two	5	18	10
Three	8	21	7
Four	14	30	20
Five	3	1	7
Six-Ten	5	4	10
Public Transit	50	1	42
	100%	100%	100%
Mean Auto Occupancy	3.0	3.4	2.8
Mean Total Occupancy*	21.5	27.9	3.2
(* Public Transit = 40)			
<u>CHARACTERISTICS</u> (n=)	Market		Role
	#1 (190)	#2 (72)	Driver (31)
Total (262)			
<u>SEX</u>			
Male	67%	54%	84%
Female	33	46	16
	100%	100%	100%
<u>AGE</u>			
Under 25	5%	3%	0%
25-29	11	8	2
30-34	22	27	32
35-39	15	13	13
40-44	14	13	7
45-49	13	11	20
50+	20	18	26
	100%	100%	100%
<u>MARITAL STATUS</u>			
Married	78%	73%	90%
Single	22	27	10
	100%	100%	100%
<u>EDUCATION</u>			
9-12 years	15%	21%	6%
13-14 years	26	33	40
15-16 years	31	19	27
16+ years	27	27	27
Vocational	1	0	0
	100%	100%	100%
<u>INCOME</u>			
\$0-10,000	3%	4%	0%
\$10,000-15,000	11	10	7
\$15,000-20,000	17	20	26
\$20,000-25,000	23	24	26
\$25,000-30,000	21	22	19
\$30,000+	24	20	22
	99%	100%	100%

TABLE S-1 Cont.

INITIAL VANPOOLER SURVEY FORM AND RESULTS

CHARACTERISTICS (n=)	Market		Role Driver (31)
	#1 (190)	#2 (72)	
ONE WAY COMMUTE			
0-19 Miles	7%	8%	3%
20-29 Miles	12	7	10
30-39 Miles	23	18	32
40-49 Miles	35	40	29
50-59 Miles	14	15	10
60+ Miles	8	12	16
	100%	100%	100%
Mean Miles	39	40	34
Median Miles	40	40	33
PREVIOUS TOTAL TIME			
0-29 Minutes	2%	1%	7%
30-59 Minutes	35	23	66
60-89 Minutes	40	46	25
90+ Minutes	23	30	2
	100%	100%	100%
Mean Minutes	64	72	45
Median Minutes	65	75	45
PREVIOUS COMMUTE SPEED			
Mean Speed			
Median Speed			

CHARACTERISTICS (n=)	Market		Role Driver (31)
	#1 (190)	#2 (72)	
PREVIOUS ACCESS MODE			
Auto - Drove	59%	52%	68%
Auto - Dropped Off	3	4	6
Walked	28	37	23
Door Pick-up	9	6	3
Other	1	1	3
	100%	100%	100%
PREVIOUS EGRESS MODE			
Walk	88%	91%	83%
Transfer Bus	4	5	0
Other	8	4	17
	100%	100%	100%
PREVIOUS EXCESS TIME			
0-4 Minutes	35%	20%	22%
5-9 Minutes	24	25	36
10-14 Minutes	23	30	22
15-19 Minutes	10	15	10
20+ Minutes	8	10	10
	100%	100%	100%

TABLE S-1 Cont.
INITIAL VANPOOLER SURVEY FORM AND RESULTS

CHARACTERISTICS (n=)	Market		Role
	#1 (190)	#2 (72)	
Total (262)			Driver (31)
PREVIOUS VEHICLE TYPE			
Subcompact	5%	7%	3%
Compact	14	31	10
Intermediate	12	27	13
Full Size	16	31	29
Van	3	3	3
Public Transit	50	67	42
	100%	100%	100%
PREVIOUS PARKING			
Company	37%	73%	44%
Public	8	17	7
Street	5	3	7
Public Transit	50	67	42
	100%	100%	100%
PARKING COST PER MONTH			
\$0	91%	79%	97%
\$1-4	4	0	0
\$5-9	1	0	0
\$10+	4	4	3
	100%	100%	100%
VEHICLE STOPS TO WORK			
None	25%	54%	15%
One	5	3	10
Two	12	7	22
Three or More	8	6	11
Public Transit	50	67	42
	100%	100%	100%
DRIVERS LICENSE			
Yes	97%	96%	100%
No	3	4	0
	100%	100%	100%
CHARACTERISTICS (n=)			
PREVIOUS AUTOS OWNED			
One	33%	36%	38%
Two	51	49	35
Three+	16	15	27
	100%	100%	100%
ACCESS TO AUTO			
At All Times	82%	79%	92%
Frequently	7	9	3
Occasionally	6	7	1
Seldom or Never	5	5	4
	100%	100%	100%
PERSONS IN HOUSEHOLD			
One	8%	5%	3%
Two	31	32	10
Three	21	20	30
Four	24	25	34
Five or More	16	18	23
	100%	100%	100%
HOUSEHOLD INCOME EARNERS			
One	44%	42%	54%
Two	53	55	43
Three or More	3	3	3
	100%	100%	100%
EVER A VANPOOLER BEFORE			
Yes	9%		
No	91		
	100%		

TABLE S-1 Cont.
INITIAL VANPOOLER SURVEY FORM AND RESULTS

CHARACTERISTICS (n=)	Market		Role
	#1 (190)	#2 (72)	
Total (262)			Driver (31)
DISTANCE, Home to GG Bus Less than 1 Block	7%	3%	0%
1-3 Blocks	16	11	13
4-6 Blocks	22	12	30
7+ Blocks	55	48	57
	100%	100%	100%
GG TRANSFER REQUIRED			
Yes	15%	41%	20%
No	66	81	60
Don't Know	19	13	20
	100%	100%	100%
DISTANCE, Work to GG Bus Less than 1 Block	21%	23%	10%
1-3 Blocks	32	38	14
4-6 Blocks	9	9	6
7+ Blocks	38	33	54
	100%	100%	100%
OTHER TRANSFER REQUIRED			
Yes	18%	23%	7%
No	71	72	68
Don't Know	11	5	25
	100%	100%	100%
DISTANCE, Work to Other Less than 1 Block			
1-3 Blocks			
4-6 Blocks			
7+ Blocks			
Not Applicable			

CHARACTERISTICS (n=)	Market		Role
	#1 (190)	#2 (72)	
Total (262)			Driver (31)
IMPORTANCE OF FACTOR			
Convenience Not Driving			
Extremely	44%	40%	3%
Quite	21	29	7
Slightly	12	18	13
None	23	13	77
	100%	100%	100%
Carpool Broke Up			
Extremely	5%	6%	0%
Quite	7	3	6
Slightly	6	5	17
None	82	87	77
	100%	100%	100%
No Bus Service			
Extremely	25%	35%	29%
Quite	20	14	39
Slightly	10	10	6
None	45	53	39
	100%	100%	100%
Decreases Fuel Use			
Extremely	34%	28%	35%
Quite	30	30	26
Slightly	15	17	16
None	21	25	23
	100%	100%	100%
Time to Relax			
Extremely	28%	24%	3%
Quite	27	29	10
Slightly	20	19	13
None	25	28	74
	100%	100%	100%

TABLE S-1 Cont.

INITIAL VANPOOLER SURVEY FORM AND RESULTS

	Market		Role
	#1 (190)	#2 (72)	
Total (262)			Driver (31)
Saves Time			
Extremely	33%	14%	32
Quite	24	14	13
Slightly	24	22	23
None	19	50	32
	100%	100%	100%
Reliable Over Carpool			
Extremely	14%	19%	10%
Quite	17	18	13
Slightly	16	13	19
None	53	55	58
	100%	100%	100%
Decreases Pollution			
Extremely	28%	35%	42%
Quite	29	27	19
Slightly	22	22	29
None	21	25	10
	100%	100%	100%
Comfortable Over Bus			
Extremely	16%	26%	30%
Quite	26	26	30
Slightly	26	28	23
None	32	34	17
	100%	100%	100%
Can Own One Less Car			
Extremely	12%	16%	22%
Quite	10	8	13
Slightly	10	9	13
None	68	73	52
	100%	100%	100%

CHARACTERISTICS
(n=)

IMPORTANCE OF FACTOR
(Cont.)

Saves Time
Extremely
Quite
Slightly
None

Reliable Over Carpool
Extremely
Quite
Slightly
None

Decreases Pollution
Extremely
Quite
Slightly
None

Comfortable Over Bus
Extremely
Quite
Slightly
None

Can Own One Less Car
Extremely
Quite
Slightly
None

	Market		Role
	#1 (190)	#2 (72)	
Total (262)			Driver (31)
Frees Use of Car			
Extremely	10%	9%	16%
Quite	11	6	16
Slightly	11	14	7
None	68	71	61
	100%	100%	100%
Reliable Over Bus			
Extremely	17%	35%	36%
Quite	21	24	13
Slightly	21	9	22
None	36	32	29
	100%	100%	100%
Door-to-Door			
Extremely	25%	16%	23%
Quite	23	19	26
Slightly	19	20	24
None	35	30	29
	100%	100%	100%
Guaranteed Seat			
Extremely	39%	27%	26%
Quite	30	26	32
Slightly	14	13	19
None	20	30	23
	100%	100%	100%
Cost Savings			
Extremely	50%	47%	58%
Quite	25	27	13
Slightly	16	15	23
None	10	11	6
	100%	100%	100%

TABLE S-1 Cont.

INITIAL VANPOOLER SURVEY FORM AND RESULTS

CHARACTERISTICS (n=)	Market		Role
	#1 (190)	#2 (72)	
Total (262)			Driver (31)
RECEIVED INFORMATION			
Friend or Relative	60	51	39
Golden Gate Van	47	50	55
Newspaper Article	51	26	64
Employer Promotion	31	51	35
Toll Booth Brochure	39	7	50
Newspaper Advertisement	33	14	39
Television Show or News	20	14	18
Other	13	4	32
Residential Promotion	14	1	18
Radio Talk Show	7	3	0
Radio Advertisement	7	3	7
Television Advertisement	5	4	7
MOST INFLUENTIAL			
Friend or Relative	38%	31%	7%
Golden Gate Van	9	9	10
Newspaper Article	11	8	10
Employer Promotion	11	42	24
Toll Booth Brochure	13	1	13
Newspaper Advertisement	4	4	10
Television Show or News	0	1	3
Other	10	4	20
Residential Promotion	4	0	3
Radio Talk Show	0	0	0
Radio Advertisement	0	0	0
Television Advertisement	0	0	0
USED CALTRANS MATCH	100%	100%	100%
Yes	17%	1%	26%
No	83%	99%	74%
	100%	100%	100%

CHARACTERISTICS (n=)	Total (262)	Market		Role
		#1 (190)	#2 (72)	
PRIMARY INITIAL REASON				
Convenience Not Driving	15%	15%	16%	3%
Carpool Broke Up	2	0	6	0
No Bus Service	7	6	9	13
Decreases Fuel Use	4	1	12	6
Time to Relax	4	2	7	0
Frees Use of Car	1	2	0	3
Reliable Over Bus	2	3	2	0
Door-to-Door	5	6	0	6
Guaranteed Seat	9	12	0	7
Cost Savings	35	34	37	39
Saves Time	12	15	4	7
Reliable Over Carpool				
Decreases Pollution	1	1	1	0
Comfortable Over Bus	3	3	2	6
Can Own One Less Car	100%	100%	100%	100%
COLLAPSED PRIME REASONS				
Service Factors	57%	60%	46%	42%
Cost Factors	39	39	40	52
Environmental Factors	4	1	14	6
	100%	100%	100%	100%

CODE: S = Service Factors
 C = Cost Factor
 E = Environmental Factors

MEMO

Crain & Associates

To: John Shellenberger Date: 23 September 1977
Richard Ribner
From: Peter FitzGerald Reference: DOT-TSC-1081-23
Subject: Survey Procedures -- Golden Gate Survey of Van Poolers
at Time of Joining a Van Pool

1. An introductory letter, questionnaire form and return envelope are to be prepared for each van pooler who has joined a van pool. The project staff may decide, if it wishes, to address the letters to each van pooler personally. And the first few items on the questionnaire should also be filled out by the staff in advance -- since the van poolers may not be familiar with their ID numbers or van pool numbers. All pages of the questionnaire, if not printed on one folding sheet of 11" x 17", should be stapled.
2. Optimally, the letter and questionnaire should be sent to the van pooler along with a "subscription agreement" (i.e., whatever a van pooler signs which states that he or she is joining a van pool) and/or a confirmation letter from the project concerning placement in a van pool. Distribution and collection of these various forms (including the completed questionnaire in a sealed envelope) may take place through the driver. However, in that case, it should be made clear to the van pooler that he also has the option of mailing the questionnaire back to the project on his own. This is to preserve the confidentiality of the survey.
3. It is important that the van poolers fill out the questionnaire before starting the van pool or as soon thereafter as possible. Van poolers who do not respond right away or who forget to complete the questionnaire should be reminded about it by phone -- up to three times. Hopefully, the questionnaires will be filled out along with the processing of other forms.

John Shellenberger
Richard Ribner
23 September 1977
Page 2

4. A log book should be kept by the project concerning distribution and return of the questionnaires. An example form is attached. The project may or may not want to include a column for the telephone number. Optimally, telephone calls should be made to the van pooler's home at night. If this cannot be done by the staff, then the van poolers should be called at their work during the day.
5. Upon receipt of the questionnaires, the project staff should check over the questionnaires for completeness and consistency. Leading zeros should be added if the respondent forgot to include them. Only the Auto or Transit section on page two should be filled out for each questionnaire. If there are any inconsistencies or incompleteness that the project staff cannot resolve on their own, the van pooler should be telephoned to clear up the matter. The column FE (or field edit) should be checked for each returned questionnaire. At this point, the questionnaires are ready for keypunching.
6. The exact timing of the need for keypunched cards cannot be determined at this time. The requirements for analysis and report writing on the part of the evaluation contractor are not set at this time. The project staff may have their own independent needs for the data for project management or to report on the progress of the project to their board of directors. At any time that the data is keypunched for the latter reasons, a "copy deck" should be keypunched and forwarded to the evaluation contractor. Otherwise, the evaluation contractor will notify the project staff of his needs for the data.
7. Keypunching instructions and a Master Code Index are attached.

/jvd

cc: Jim Poage, TSC

S-15/S-16

APPENDIX T
SUPPLEMENTARY SURVEY FORM AND RESULTS

SUPPLEMENTARY GOLDEN GATE VANPOOLER SURVEY

(Introductory Period)

P I

Name: _____

1. ID Number:.....

2. Vanpool Number:.....

3. Home Phone:.....

4. Which of the following methods do you use to meet your vanpool in the morning:

- 1 = Pick-up at door
- 2 = Walk to a pick-up point
- 3 = Go by car to a pick-up point
- 4 = Go by public transit to a pick-up point
- 5 = Other: _____

a. During good weather?.....

b. During bad weather (e.g., rain)?.....

5. If you answered walk for either case, how many blocks do you walk:

a. During good weather?.....

b. During bad weather?.....

6. If you answered by car for either case:

a. How many miles do you go in the car?.....

b. How many persons ride together, including you?.....

c. Do you drive, alternate or ride to the pick-up point?...

- 1 = Always drive to the pick-up point
- 2 = Share driving to the pick-up point
- 3 = Always ride to the pick-up point

7. If you answered by public transit for either case:

a. How many blocks do you walk to the bus?.....

b. How many minutes do you usually wait for the bus to pick you up?.....

c. How many minutes do you travel on the bus to the pick-up point?.....

d. What is the total one-way fare that you pay?....\$

(please turn over)

Drop-off in the Morning

Codes

- 1 = Dropped off at door
- 2 = Walk from drop-off point
- 3 = Public transit

8. Which of the above methods do you use to get from your vanpool drop-off point to work in the morning:

- a. During good weather?.....
- b. During bad weather (e.g., rain)?.....

9. If you answered walk for either case how many blocks do you walk:

- a. During good weather?.....
- b. During bad weather?.....

10. If you answered by public transit for either case:

- a. How many blocks do you walk to the bus?.....
- b. How many minutes do you wait for the bus?.....
- c. How many minutes do you travel on the bus?.....

Overall Travel Time in the Morning

11. On a good weather day:

- a. What time do you usually leave your house? :
- b. What time do you arrive at work?..... :
- c. What time do you start work?..... :
- d. If you spend time doing other things on the way to work (e.g., eating breakfast out or shopping), how much of the above time is spent doing these other things (in minutes)?.....

Please explain any other features of your morning commute arrangements that the above questions did not include:

12. Before joining a Golden Gate introductory vanpool, did you ever ride in a vanpool at any time before?.....
1 = Yes 2 = No

If Yes, please describe how long you have used previous vanpools and what your experience with them was: _____

13. How long have you lived in your present residence?.....
1 = Less than 1 year 4 = 6 - 10 years
2 = Between 1 - 2 years 5 = More than 10 years
3 = 2 - 5 years

14. How long have you worked for your present employer at the same work location?.....
1 = Less than 1 year 4 = 6 - 10 years
2 = Between 1 - 2 years 5 = More than 10 years
3 = 2 - 5 years

15. If you were living at your present residence and working at your present employer one year ago, how did you commute then?..
1 = Drive alone 4 = Ferry
2 = Public Bus 5 = Carpool (2 or more)
3 = Club Bus 6 = Other _____

16. How long do you presently anticipate that you will continue living at your current residence?.....
1 = Less than 1 year 3 = Do not know
2 = More than 1 year

17. How long do you anticipate continuing to work at your present location?.....
1 = Less than 1 year 3 = Do not know
2 = More than 1 year

18. How many persons work for your employer at the same place that you work?.....
1 = Less than 10 5 = 250 - 499
2 = 10 - 49 6 = 500 - 999
3 = 50 - 99 7 = 1000 or more
4 = 100 - 249

19. How long have you lived or worked in the North Bay counties?...
1 = Less than 1 year 3 = 6 - 10 years
2 = 1 - 5 years 4 = More than 10 years

(please turn over)

The following question is for the sake of evaluating all vanpool drivers as a group and needs to be answered by riders only; this information will be kept confidential.

39. Please rate your driver/coordinator on the following scale:
1 = Excellent 2 = Very Good 3 = Good 4 = Fair 5 = Poor

- a. Reliability of pick-up and delivery on time.....
- b. Driving ability.....
- c. Consideration for passengers.....
- d. Communication with passengers.....
- e. Organizational abilities.....

40. Please rate the following features of your vanpool service:
1 = Excellent 2 = Very Good 3 = Good 4 = Fair 5 = Poor

- a. Travel time.....
- b. Cost.....
- c. Seating.....
- d. Comfort.....
- e. Noise level.....
- f. Lighting.....
- g. Safety.....
- h. Compatibility with other vanpoolers.....
- i. Smoking rules.....
- j. Cleanliness of van.....
- k. Attractiveness of vans.....
- l. Overall.....

Please share your ideas for improving the program, your likes and dislikes: _____

SUPPLEMENTARY SURVEY

The Supplementary Survey was designed to collect additional data on vanpoolers' commute requirements and on their assessment of the vanpool service. This survey was distributed to all (287) vanpoolers in June 1977; 165 completed forms were returned.

TABLE T-1.
VANPOOLER CHARACTERISTICS

CHARACTERISTICS (n=)	Total (165)	CHARACTERISTICS (n=)	Total (165)
PRESENT RESIDENCE		PRESENT RESIDENCE	
0-1 Year	24%	0-1 Year	8%
1-2 Years	20	1-2 Years	60
2-5 Years	29	2+ Years	32
6-10 Years	15	Don't Know	100%
11+ Years	12		
	100%		
PRESENT WORK SITE		PRESENT WORK SITE	
0-1 Year	16%	0-1 Year	9
1-2 Years	9	1-2 Years	37
2-5 Years	37	2-5 Years	18
6-10 Years	18	6-10 Years	20
11+ Years	20	11+ Years	100%
	100%		
FUTURE RESIDENCE SAME		FUTURE RESIDENCE SAME	
0-1 Year	6%	0-1 Year	55
2+ Years	55	2+ Years	39
Don't Know	39	Don't Know	100%
	100%		
FUTURE WORK SITE SAME		FUTURE WORK SITE SAME	
0-1 Year	8%	0-1 Year	32
2+ Years	60	2+ Years	6
Don't Know	32	Don't Know	1
	100%		100%
CHANGE RESIDENCE OR WORK		CHANGE RESIDENCE OR WORK	
0-1 Year	65%	0-1 Year	30
2+ Years	30	2+ Years	5
	100%		100%
EMPLOYER SIZE		OCCUPATION	
0-9	8%	Professional	55%
10-49	11	Manager	16
50-99	7	Sales	4
100-249	8	Clerical	14
250-499	11	Craftsman Skilled	3
500-999	11	Operators	4
1000+	44	Laborers-Unskilled	1
	100%	Service Worker	1
		Other	2
			100%
		WORK OVERTIME	
		Never	61%
		Less Than 1 Day a Week	32
		1-2 Days a Week	6
		3+ Days A Week	1
			100%
		USE OWN CAR FOR WORK	
		Never	65%
		Less Than 1 Day a Week	30
		1+ Days a Week	5
			100%

TABLE T-1 Cont.
VANPOOLER CHARACTERISTICS

<u>CHARACTERISTICS</u> (n=)	Total (165)	<u>CHARACTERISTICS</u> (n=)	Total (165)
OUTSIDE WORK TRAVEL		ACCESS - GOOD WEATHER	
Never	68%	Driver	10%
Less Than 1 Day a Week	30	Pick-up at Door	23
1+ Days a Week	3	Walk to Pick-up	37
	<u>100%</u>	Auto to Pick-up	30
			<u>100%</u>
WEEKS OF VACATION A YEAR		ACCESS - BAD WEATHER	
One	4%	Driver	10%
Two	33	Pick-up at Door	40
Three	30	Walk to Pick-up	15
Four	22	Auto to Pick-up	35
Five+	11		<u>100%</u>
	<u>100%</u>	ACCESS BLOCKS - GOOD WEATHER	
		One	17%
HANDICAP USING BUS		Two-Three	10
Yes	3%	Four+	10
No	97		<u>37%</u>
	<u>100%</u>	ACCESS BLOCKS - BAD WEATHER	
		One	10%
HANDICAP DRIVING CAR		Two+	5
Yes	2%		<u>15%</u>
No	98	AUTO MILES TO VANPOOL *	
	<u>100%</u>	One	15%
		Two	8
HANDICAPS		Three-Five	6
Walking	1%	Six-Twenty	6
Vision	1	Median miles	35%
Other	3		2.9
None	95		
	<u>100%</u>		

*Based on Bad Weather

TABLE T-1 Cont.
VANPOOLER CHARACTERISTICS

<u>CHARACTERISTICS</u> (n=)	Total (165)	<u>CHARACTERISTICS</u> (n=)	Total (165)
AUTO OCCUPANCY TO VANPOOL *		AUTOS OWNED WHILE IN INTRODUCTORY VAN	
Drive Alone	22%	None	1%
Two	12	One	29
Three+	1	Two	51
	35%	Three+	19
			100%
AUTO ROLE TO VANPOOL *		AUTO OWNERSHIP IMPACT	
Always Drive	23%	No Effect	80%
Share Driving	7	Deferred Replacing	8
Always Ride	5	Avoided Buying	7
	35%	Sold	1
		Will Sell	4
			100%
EGRESS MODE - GOOD WEATHER		AUTO INSURANCE CHECKED	
At Door	54%	Yes	35%
Walk	46	No	65
	100%		100%
EGRESS MODE - BAD WEATHER		AUTO INSURANCE REDUCED	
At Door	60%	Yes	15%
Walk	40	No	85
	100%		100%
EGRESS BLOCKS - GOOD WEATHER		PREMIUMS SAVED	
One	23%	\$1-49/Year	10%
Two-Three	16	\$50-300/Year	5
Four+	7	None	85
	46%		100%
EGRESS BLOCKS - BAD WEATHER			
One	16%		
Two-Three	13		
Four+	11		
	40%		

*Based on Bad Weather

TABLE T-1 Cont.
VANPOOLER CHARACTERISTICS

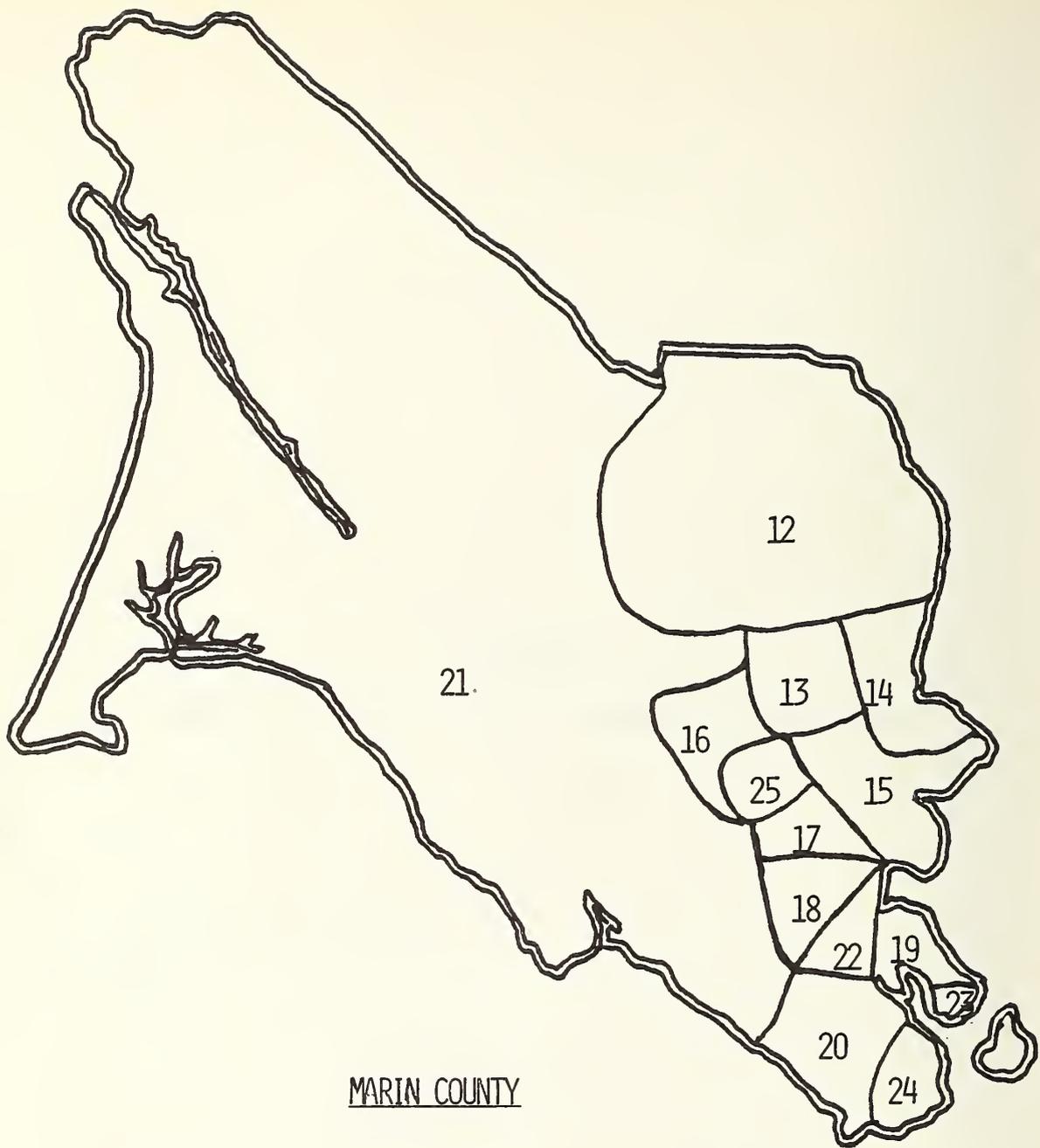
CHARACTERISTICS (n=)	Total (165)	CHARACTERISTICS (n=)	Total (165)
RATINGS OF DRIVERS*			
Schedule Reliability	79%		
Excellent	14		
Very Good	6		
Good	1		
Fair	100%		
Driving Ability	52%		
Excellent	27		
Very Good	16		
Good	4		
Fair	1		
Poor	100%		
Driver Consideration	71%		
Excellent	16		
Very Good	11		
Good	1		
Fair	100%		
Driver Communication	66%		
Excellent	23		
Very Good	7		
Good	4		
Fair	100%		
Organizational Abilities	65%		
Excellent	23		
Very Good	9		
Good	3		
Fair	100%		
		* Riders Only	
RATINGS OF FEATURES			
Travel Time	60%		
Excellent	26		
Very Good	10		
Good	3		
Fair	1		
Poor	100%		
Cost	34%		
Excellent	25		
Very Good	26		
Good	11		
Fair	4		
Poor	100%		
Seating	40%		
Excellent	30		
Very Good	23		
Good	5		
Fair	2		
Poor	100%		
Comfort	32%		
Excellent	37		
Very Good	21		
Good	8		
Fair	2		
Poor	100%		
Noise Level	23%		
Excellent	33		
Very Good	30		
Good	10		
Fair	4		
Poor	100%		

TABLE T-1 Cont.
VANPOOLER CHARACTERISTICS

<u>CHARACTERISTICS</u> (n=)	<u>RATINGS OF FEATURES (cont.)</u>	Total (165)
<u>Lighting</u> Excellent Very Good Good Fair Poor		23%
		31
		24
		13
		9
	<u>100%</u>	
<u>Safety</u> Excellent Very Good Good Fair Poor		23%
		38
		35
		3
		1
	<u>100%</u>	
<u>Compatibility</u> Excellent Very Good Good Fair		35%
		47
		14
		4
		<u>100%</u>
<u>Smoking Rules</u> Excellent Very Good Good Fair Poor		67%
		16
		7
		4
		<u>100%</u>
<u>Van Cleanliness</u> Excellent Very Good Good Fair		56%
		29
		11
		4
		<u>100%</u>
<u>CHARACTERISTICS</u> (n=)	<u>RATINGS OF FEATURES (cont.)</u>	Total (165)
	Van Attractiveness	48%
	Excellent	33
	Very Good	14
	Good	5
	<u>100%</u>	
Overall Satisfaction	Excellent	34%
	Very Good	49
	Good	16
	Fair	1
		<u>100%</u>

APPENDIX U

GEOGRAPHICAL CODES: Origin and Destination



12 = NOVATO

13 = MARINWOOD, LUCAS VALLEY
TERRA LINDA

14 = SANTA VENETIA

15 = SAN RAFAEL

16 = FAIRFAX

17 = GREENBRAE-KENTFIELD

18 = LARKSPUR

19 = TIBURON

20 = MILL VALLEY

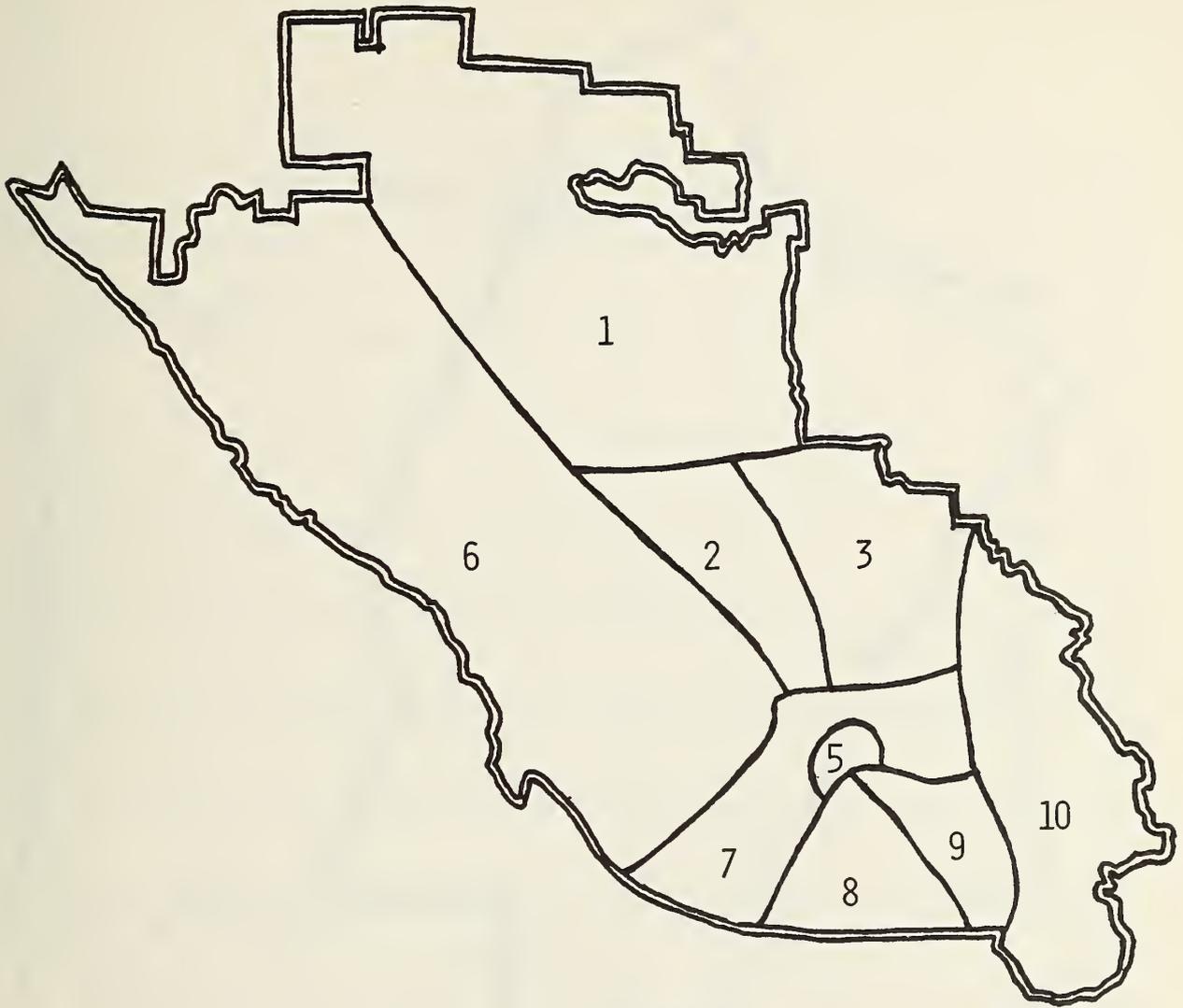
21 = WEST MARIN COUNTY

22 = CORTE MADERA

23 = BELVEDERE

24 = SAUSALITO

25 = SAN ANSELMO



SONOMA COUNTY

1 = W. SONOMA COUNTY

2 = WEST SANTA ROSA

3 = EAST SANTA ROSA

4 =

5 = COTATI

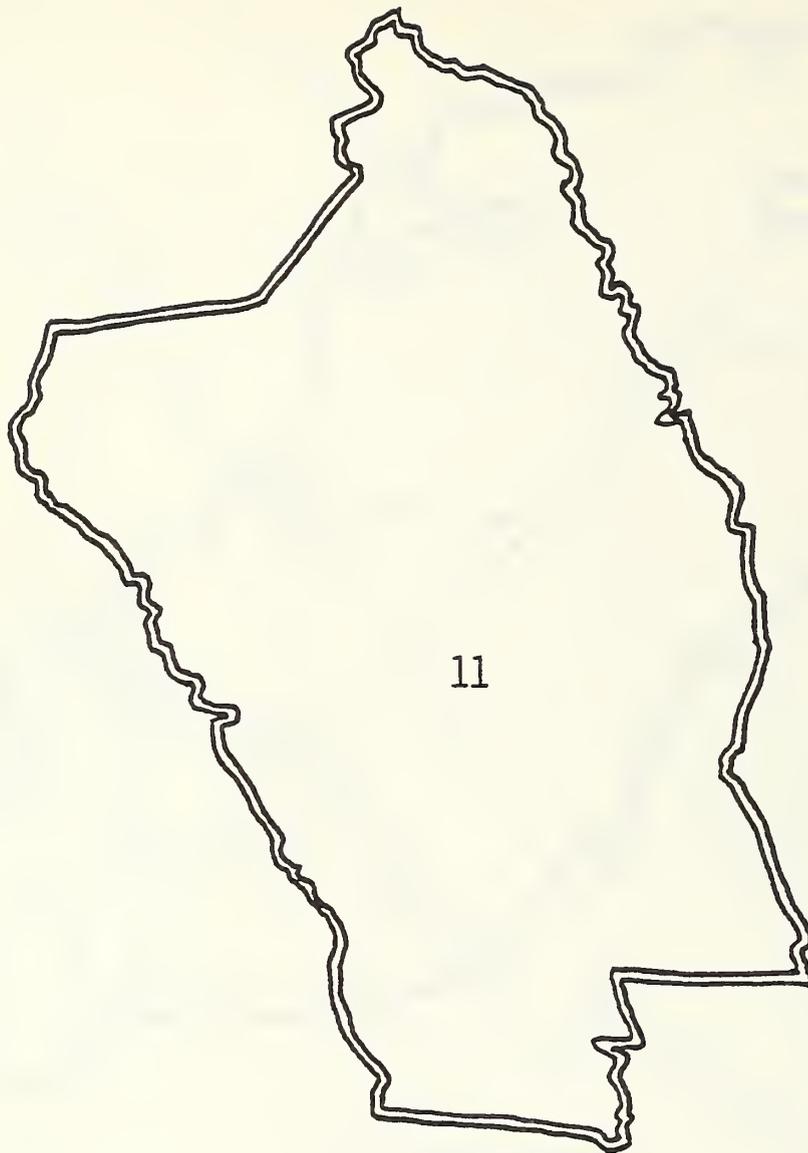
6 = W. SONOMA COUNTY

7 = ROHNERT PARK

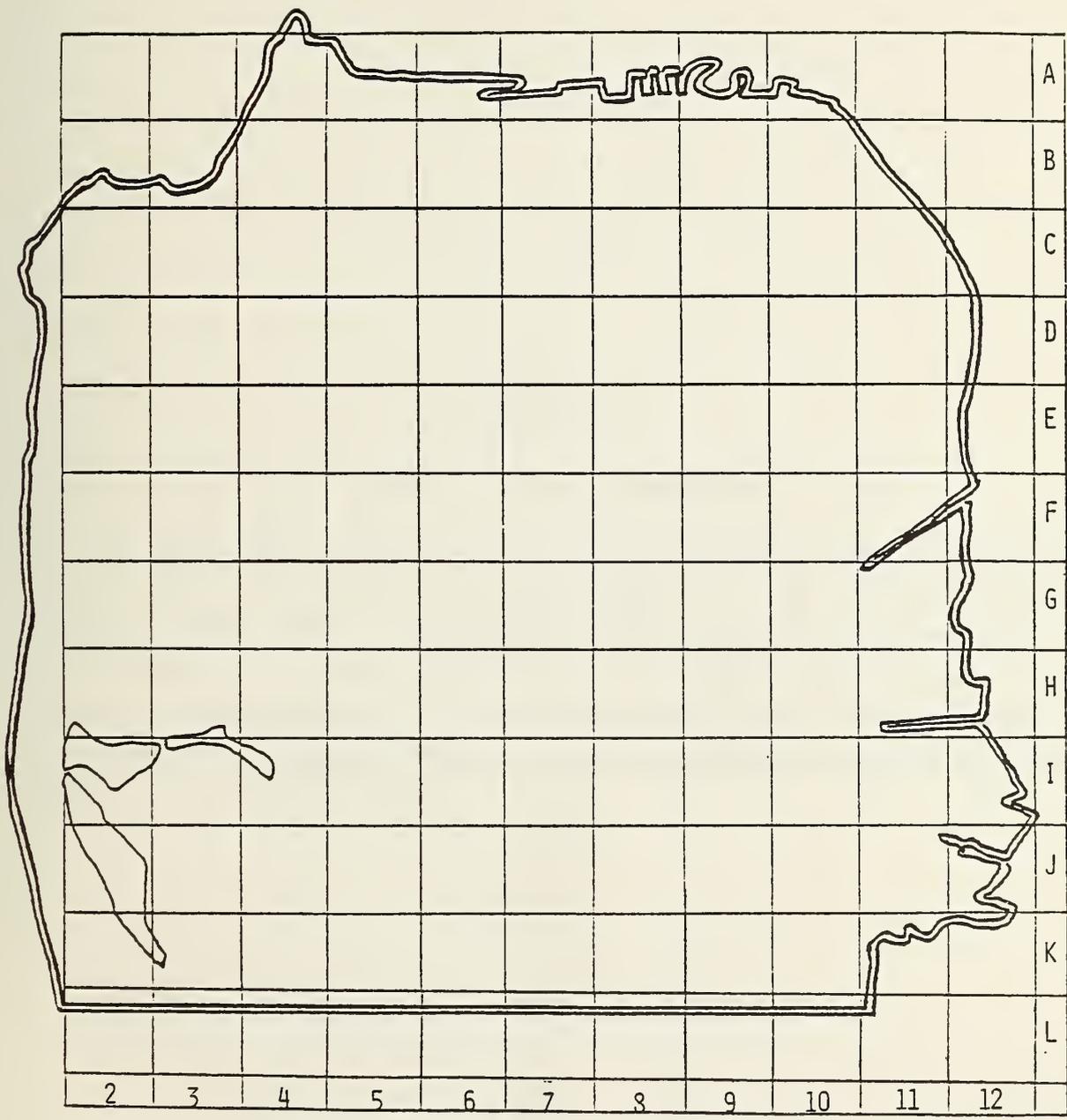
8 = W. PETALUMA

9 = E. PETALUMA

10 = SONOMA



NAPA COUNTY



SAN FRANCISCO CITY & COUNTY

APPENDIX V

REPORT OF NEW TECHNOLOGY

A thorough review of the work performed under this contract has revealed no significant innovations, discoveries, or inventions at this time. In addition all methodologies employed are available in the open literature. However, the findings in this document do represent an improvement and they will be useful throughout the United States in designing and evaluating transit ridesharing alternatives.

V-1/V-2



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